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RESULTS

OF THE

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METEOROLOGICAL OBSERVATIONS

MADE AT THE

BLUE HILL METEOROLOGICAL OBSERVATORY,

MASSACHUSETTS, U. S. A.,

Observations & investigations ...

QB4
H3A4

IN THE YEAR 1886:

c. 1887-1926

UNDER THE DIRECTION OF

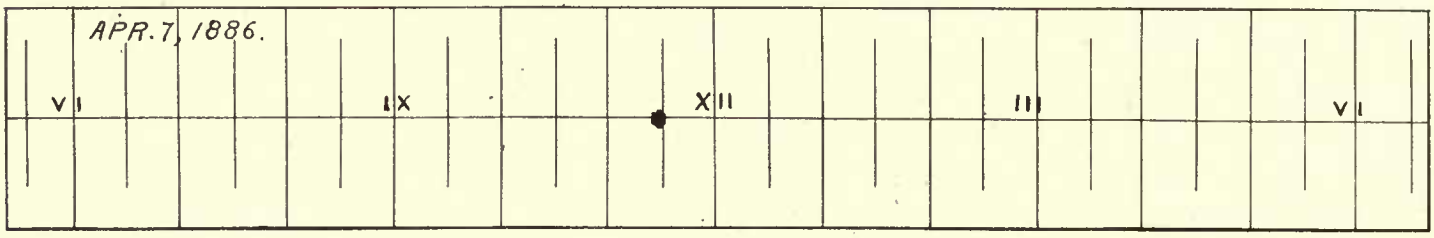
A. LAWRENCE ROTCH, S. B.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
No. 24 Franklin Street.
1887.

SUNSHINE RECORDS.

FOR DESCRIPTION OF INSTRUMENTS SEE PAGE VIII.
" " " PHENOMENA " PP. 44 & 45.

CAMPBELL-STOKES.



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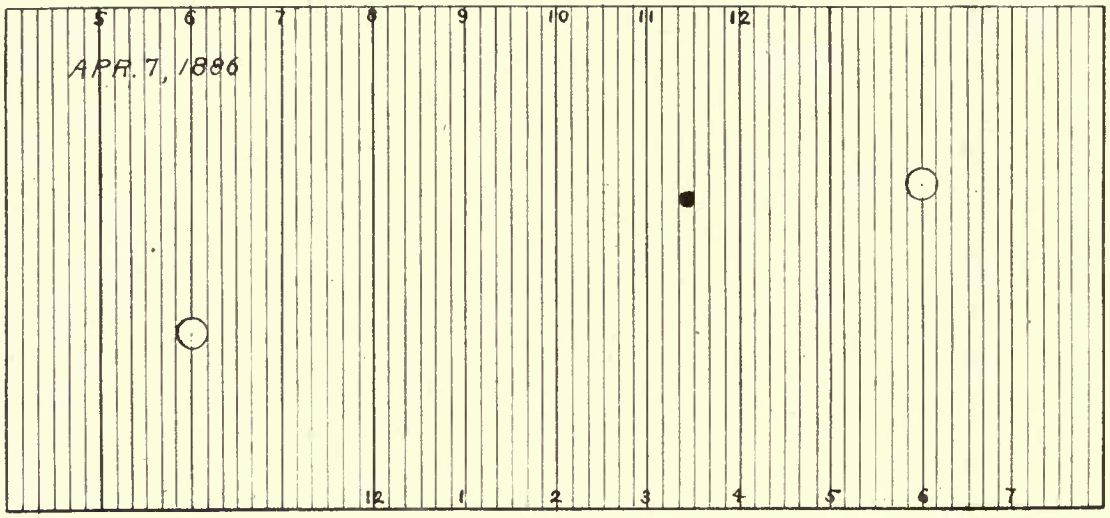

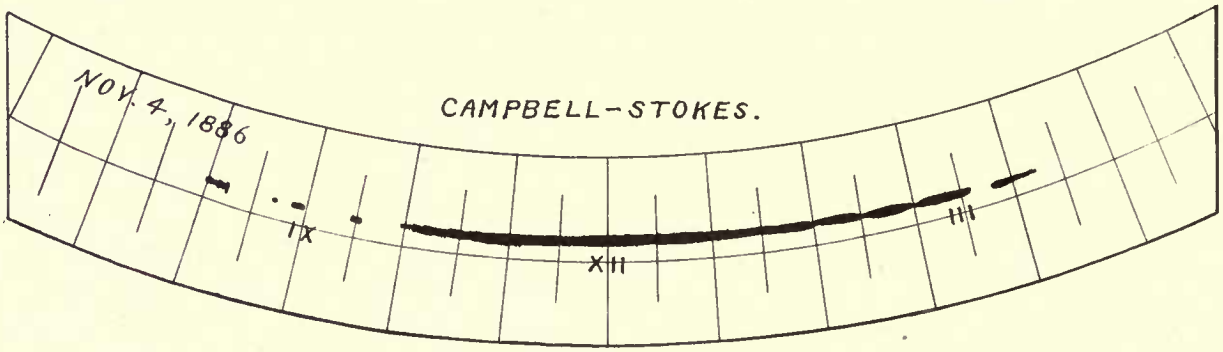

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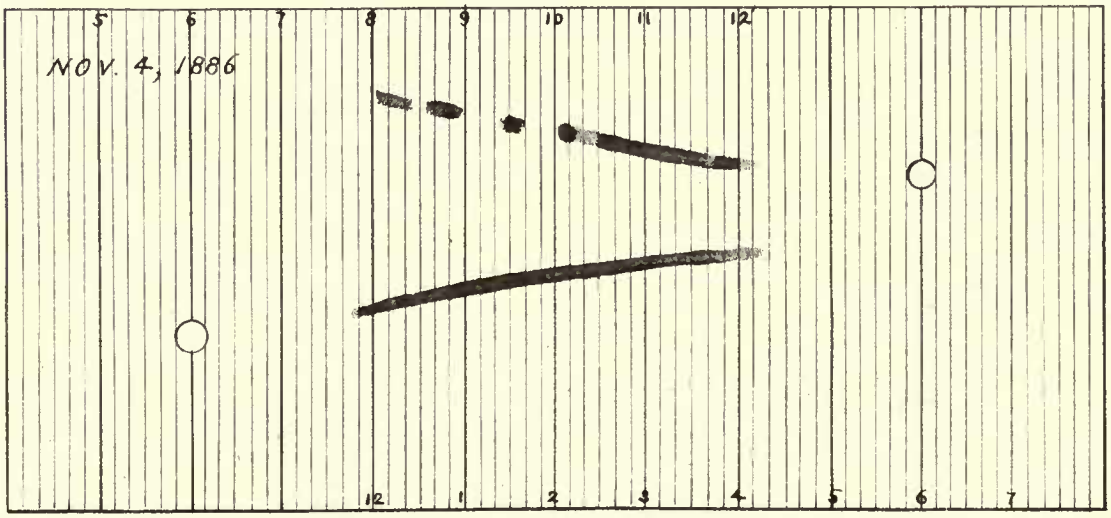

RESULTS

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METEOROLOGICAL OBSERVATIONS

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ERRATA AND ADDENDA

TO THE

BLUE HILL OBSERVATIONS FOR 1886.

Page viii. — To the description of the Sunshine Recorders, add: "Records of both the instruments are given in the Frontispiece."

Pages 3 to 7. — Supply the following omitted dates on which western mountains were visible: —

Nobscot: March 22, June 22, August 4, November 22. Wachusett: December 28. Monadnock: July 12.

Page 3; April 7. — Amount of sunshine, read 0 h. 6 m., instead 0 h. 0 m.

Page 3; April 7. — Per cent of sunshine, read 01, instead 00.

Pages 3 and 8. — Duration of bright sunshine for April, read 177 h. 25 m., instead 177 h. 19 m.

Page 8. — Duration of bright sunshine for year, read 2,098 h. 19 m., instead 2,098 h. 13 m.

Pages 16 to 27. — The total wind movements for each day are not always the exact sums of the hourly movements, as they were otherwise obtained.

Page 18. — Mean wind movement for March, 3–4 P. M., read 25.4, instead 2.54.

Page 31. — Sum for last eight days of February, at 2 P. M., read 232.400, instead 332.400.

Page 32. — Monthly sum for March, at 10 P. M., read 904.303, instead 304.303.

Page 39. — In the sums for the last eleven days of October, from 5 A. M. to 11 P. M., inclusive, the three left-hand figures of each column read 323, instead 393 or 293.

Page 44. — In the description of the phenomena of April 7, insert: "For the automatic sunshine record, see the Frontispiece to this volume."

Page 45. — To the mention of the humidity record of November 4, add: "The record of this day's sunshine is shown in the Frontispiece."

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MAIN

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INTRODUCTION TO THE BLUE HILL OBSERVATIONS.

AN ACCOUNT OF THE OBSERVATORY.

Its History and Personnel. — The Blue Hill Meteorological Observatory was established as a private observatory by the undersigned in 1885, and is now one of the best equipped meteorological stations in the United States. Tri-daily observations were commenced Feb. 1, 1885, and have since been regularly made at the hours of 7 A. M., 3 and 11 P. M., seventy-fifth meridian time, adopted by the United States Signal Service. Monthly summaries of these observations have been sent to the New England Meteorological Society for publication in its *Bulletin*, to the Signal Service for its *Weather Review*, and to persons interested. A summary of the observations for the year ending Jan. 31, 1886, together with a summary of the corresponding observations made at the Boston Signal Service station, ten and one half miles north of and five hundred and fifteen feet below the observatory, was printed and distributed. Besides the regular meteorological observations, considerable experimental work has been done, notably in weather predictions. Details of this work may be found in a pamphlet by the undersigned, printed not published, entitled *An Account of the Foundation and Work of the Blue Hill Meteorological Observatory.*

The current expenses of the observatory, amounting to about $2,500 a year, are paid by the undersigned, who directs the work. Mr. Willard P. Gerrish was the observer during the first year, and since that time the position has been filled by Mr. H. Helm Clayton. Frank Brown has acted as steward from the opening of the observatory.

Its Location and Description. — Great Blue Hill, upon whose summit the observatory stands, is situated in Norfolk County, Massachusetts, partly in the town of Milton and partly in that of Canton. The elevation above sea level is about six hundred and thirty-five feet, and it is thus not only the highest land in eastern Massachusetts, but is also the highest point within ten miles of the Atlantic coast from Maine to Florida. Great Blue Hill exceeds the other summits of the Blue Hill range by more than one hundred feet, and the surrounding country being low, its exposure is free in all directions, which renders it admirable as a site for a meteorological station, uninfluenced by the causes which affect the records of most of the Government Signal Stations. A road nearly a mile long, and practicable for carriages, has been built up the hill, and a telephone line connects the observatory with Boston. The position of the observatory is fixed by a brass plate on the lower floor of the tower. This marks the supposed site, 2.2 feet below the plate, of the copper bolt set by Simeon Borden, about 1834, for the Massachusetts Trigonometrical Survey, in latitude 42° 12′ 44″ N., longitude 71° 6′ 53″ W., and 635.05 feet above mean tide. The bolt set by the United States Coast and Geodetic Survey, in 1844, is 27.35 feet N. 11° 16′ E. of the supposed site of the Borden bolt.

The observatory itself is a two-story circular tower, twelve feet in diameter inside and twenty-five feet high, built of the broken stone found on the hill. This contains some of the instruments, others being exposed above its flat roof which is surrounded by a parapet. Extending southward from the tower is a one-story hip-roof house with two bedrooms, a dining-room and kitchen. This is also built of stone, but has a wooden shed attached. In the construction of the building every precaution was taken to insure solidity, the walls being twenty inches thick and the roof securely anchored to them. It has, however, been found impossible to make the walls impervious to rain which is driven by the high wind through the minute cracks which the stone must contain, and several coats of marine varnish have not rendered it water-proof. A large stove in the lower room of the tower heats the upper room through a register, and by its flue and that of the kitchen range also warms the other rooms. In the cellar is a wooden tank which collects the rain falling upon the roof. A safe built into the chimney protects the records and charts from fire. The cost of the building, designed by Messrs. Rotch and Tilden, was about $3,500.

Its Auxiliary Stations. — A station was established July 1, 1886, at the foot of the hill, four hundred and forty feet below the observatory and three quarters of a mile northwest of it, which is visited daily. It is provided with maximum and minimum thermometers and a Draper thermograph exposed in a Hazen shelter, and with a rain gauge similar to that on the hill. Some curious variations of temperature and precipitation between the two stations have been noted, but enough data has not yet been accumulated for publication. Another station in Milton and one in the neighboring town of Randolph send monthly records of temperature and precipitation to the observatory, which receives reports of the synchronous observations made at the Boston Signal Service station.

Remarks concerning the Self-Recording Instruments. — A feature of the instruments is their automatic record, the "eye" observations of the standard instruments serving only as a control upon the registration. With the exception of the force of the wind, the species of clouds and their direction of motion, all the elements observed are recorded continuously. So far as possible, the principle of having duplicate instruments for use in case of accident is applied. The register sheets of all the instruments are changed daily at 11 P. M., at which hour the meteorological day ends.

Barometers. — The barometers are kept in a glass case in the lower room of the tower, where the temperature is most uniform, though a considerable range of temperature necessarily occurs in winter between the day and the night. The barometer cisterns are six hundred and forty feet above mean tide.

The standard since November, 1885, is Hicks, No. 818. This barometer is constructed on the Fortin system, has a tube about 0.5 inch in diameter, and is read by a vernier directly to 0.002 inch. The instrumental correction, as determined at Kew Observatory, in October, 1885, is +0.009 inch, including capillary action. As compared indirectly with the Signal Service standards at Washington, in February, 1886, its corrected readings are 0.015 inch too low. A Green barometer, No. 2,677, of the Signal Service pattern, reading also to 0.002 inch, is kept as a reserve instrument. It was formerly used as the standard, its readings being 0.017 inch lower than the assumed Kew standard now adopted by the observatory.

A Draper self-recording mercurial barometer, in a glass case near the other barometers, has given an almost continuous record since May, 1885. The principle of this instrument, which was constructed by Black and Pfister, of New York, is as follows: A glass tube thirty-six inches long, with the upper portion of larger diameter than the lower, is held firmly in a vertical position, and filled in the usual manner with quicksilver; its lower or open end dips into a tube or reservoir containing the same metal. This reservoir is suspended on two spiral steel springs, and has freedom of motion up and down. When the pressure of the atmosphere diminishes, a portion of the mercury flows out of the tube into the reservoir; this, becoming heavier, stretches the steel springs, causing the ink pencil fastened to them to mark downwards. If the pressure increases, the reverse movement takes place. The ink pencil makes its mark on a ruled paper register, carried at the rate of half an inch per hour from right to left by a clock. The movement of the pencil on the register can be magnified to any extent by increasing the length of the spiral springs; in this instrument it multiplies three times. The ink pencils used in the Draper instruments are tubes of glass filled with red ink, which touch lightly against the paper register; the advantage of these over lead pencils is that little or no pressure is required. This barograph gives the correction for temperature, or reduction to 32°, from the fact that it weighs the column of mercury instead of measuring its length, which is affected by heat. There is a slight temperature error caused by the unequal bore of the tube and by the expansion of the steel springs, but this is very small. Since July, 1885, the record has been checked by daily comparisons with the standard barometer, and the barograph is now so well regulated that the average correction is only 0.01 inch. Tracings of the barograph, somewhat reduced in size, are shown in Plates Nos. 1 and 1 A, at the end of this volume.

An aneroid barograph, made by Richard Brothers, of Paris, is kept as a reserve instrument. It consists of eight small aneroid boxes placed one above the other, which, by means of a pen on the end of a lever, register the variations of atmospheric pressure upon a paper-covered drum, which is revolved by clockwork inside. Unlike the Richard instruments in general, the drums of those constructed for this observatory revolve once a day instead of once a week, thereby making the time scale much larger. For an aneroid barometer this is remarkably accurate.

Thermometers and Hygrometers. — These are exposed in a wooden louvre shelter built from a north window of the tower, fifteen feet above the ground. In its construction special pains were taken to secure ventilation by making the roof double and setting the shelter six inches out from the wall, and to cut off radiation from inside the tower by having double windows. Comparisons have been made between this shelter and an isolated one built according to Prof. H. A. Hazen's specifications, now adopted by the Signal Service as the standard. Except during rapid changes of temperature, when the wall shelter was somewhat sluggish, the error of the latter was less than +0.5°. For convenience the window shelter is employed.

The observatory standard thermometers are Hicks, No. 252,161, verified at Kew, and Baudin, No. 10,682. The working standards are H. J. Green wet and dry bulb and maximum and minimum thermometers. These have been frequently compared with the standard instruments, and the resulting corrections applied.

A Richard thermograph has been in use since April, 1886. This instrument has a curved brass tube filled with alcohol, which straightens by the expansion of the alcohol when the temperature rises, and recurves again when the temperature falls and the alcohol contracts. The motion of the tube is registered on a drum by means of a pen on a lever. The error of the thermograph, ascertained several times daily by comparison with the standard thermometer, is not more than 0.5°, except for the maximum and minimum temperatures which are obtained from the maximum and minimum thermometers, and their hours of occurrence only from the thermograph.

In cold weather a Koppe hair hygrometer, made by Hottinger, of Zürich, has been used to determine the relative humidity and the dew point. In winter the mean relative humidity given by the hair hygrometer is about six per cent lower than that calculated from the readings of the wet and dry bulb thermometers, which are

known to give erroneous results at low temperatures. In summer the mean relative humidity obtained by the two methods agrees within one per cent. An Alluard condensation dew point apparatus is occasionally used as a check upon the other instruments.

A Richard registering hygrometer has been in use since April, 1886, and has given satisfactory results for such an instrument, its error relative to the hair hygrometer or psychrometer being noted several times daily. The hygrometric material employed is a thin strip of horn, whose alteration in length with variations of moisture is registered, as in the thermograph, upon a drum, which revolves once a day, giving a time scale of three tenths of an inch per hour. Sheets from these instruments are shown in Plates Nos. 2 to 5, slightly reduced in size.

Anemoscope and Anemometers. — The instruments for measuring the direction, velocity, and force of the wind are exposed about ten feet above the roof of the tower and thirty-five feet above the ground.

A Draper recording anemoscope and anemometer, made by Black and Pfister, have given almost continuous records since March, 1885, with the exception of short periods when repairs were necessary. The anemoscope is constructed as follows: From the wind vane a vertical shaft descends into the tower. The lower end of the shaft carries a brass cylinder covered with paper to receive the record of the oscillations of the wind. An ink pencil, bearing lightly against the paper, descends from the top to the bottom of the cylinder in the course of twenty-four hours, its movement being regulated by a clock. When the wind shifts, the paper register, therefore, correspondingly turns and the pencil makes a trace of the movement; if there is a calm, the pencil makes a straight line downward, a gentle breeze being sufficient to cause the cylinder to oscillate on each side of its mean direction. On the sheet of paper are printed the eight points of the compass and the hours, the trace thus showing the direction and all the variations of the wind, with the times of their occurrence. A reduced copy of the anemoscope sheet, after removal from the cylinder, is given in Plate No. 7.

The principle of the Draper anemometer is this: On the ends of a cross supported by a vertical shaft are four hemispherical cups, which, by the action of the wind, are caused to revolve with a speed, as determined by Dr. Robinson, of about one third the velocity of the wind. On the lower end of the shaft, thus made to revolve by the cups, is an endless screw connecting with a train of wheels which move a cam. This is so arranged that one turn of the cam corresponds to twenty miles movement of the wind. An ink pencil, which rests on the edge of the cam and slides in vertical guides, is carried by each revolution of the cam from the bottom to the top of a sheet of paper, which is drawn aside by a clock at the rate of half an inch per hour. The number of times that the pencil moves from the bottom to the top of the paper, multiplied by twenty, gives the number of miles that the wind has travelled in an hour or day. A reduced copy of the anemometer sheet is shown in Plate No. 6.

A smaller Robinson anemometer records electrically by the Gibbon self-register each mile travelled by the wind. This apparatus, which is that made for the Signal Service by the Hahl Manufacturing Company, of Baltimore, has been used during 1886. On account of the open time scale of the register (two inches per hour), it serves to show the velocity of brief gusts of wind better than does the Draper anemometer, and is also available to supply breaks in the latter record.

The average movements recorded by the Draper and Signal Service anemometers differ by less than one per cent. The latter instrument, in a series of tests, gave about five per cent lower velocities than did a Hicks portable anemometer, whose dial was graduated at Kew Observatory by comparison with the standard anemometer.

A wind pressure gauge, constructed from the writer's designs by the Crosby Steam Gauge Company, of Boston, has been in use during 1886. A vane keeps a disk with a square foot of surface normal to the wind, whose pressure stretches a spring in the tail of the vane and leaves an index at the maximum pressure in pounds, to which it has been subjected. After the pressure has been converted into velocity by the formula $v = \sqrt{\frac{p}{0.005}}$, where v is the velocity in miles per hour, and p is the pressure in pounds per square foot, the velocity thus obtained agrees closely with the maximum velocity for a period of five minutes, as registered by the Signal Service anemometer. The extreme velocity of the gusts would naturally be expected to exceed the mean velocity for five minutes, and this is generally found to be the case. The agreement is closest at moderate velocities, but whether this is owing to the inertia of the pressure plate causing it to be sluggish with light winds, or whether the velocity of the gusts exceeds in a greater ratio the mean velocity during high winds than during low winds, has not been determined.

Rain and Snow Gauges. — Three of these have been used during 1886. They are placed near one another in a freely exposed position, one hundred and fifty feet northeast of the observatory, with their rims within two feet of the ground.

The standard rain gauge is a copper cylinder, fourteen inches deep, with a turned brass rim eight inches in diameter. The rain is measured with a stick in a tube having one tenth the area of the receiver. This is the gauge recommended by the New England Meteorological Society. To ascertain the rainfall during a storm without emptying the gauge, it is weighed upon a spring balance compensated for the weight of the empty gauge and graduated to indicate 0.02 inch.

The standard snow gauge has an aperture similar to the rain gauge. The receiver is sixteen inches deep, and is enlarged below to keep the snow from blowing out, this plan having been tried in Europe. The gauge, with the unmelted snow, is weighed upon the spring balance, which is compensated as before for the weight of

this empty gauge. This method obviates loss by evaporation in melting the snow for measurement, and enables the snowfall to be quickly ascertained.

The self-recording rain and snow gauge constructed after the writer's design, by Richard Brothers of Paris, has been in use since March, 1886. The receiver in this gauge rests upon a platform balance, and when rain falls its weight causes the balance to record the amount and time of occurrence of the rain upon a revolving drum, as in the other Richard instruments. Tracings of this gauge, slightly reduced in size, are shown in Plates Nos. 8 and 9. To adapt it to snow another receiver is used, which is deeper, with an inner shield to prevent clogging by sleet. The author believes this to be the first successful attempt to record snow automatically without first melting it. The records of the registering gauge agree fairly well with those of the standard with which they are compared. The former gauge has been surrounded by a flaring wire screen on the Nipher system to protect it from the wind, and more snow has thereby been caught in windy weather than before.

Sunshine and Cloud Instruments.—The sunshine recorders are placed on the south parapet of the tower, with no obstructions to affect their records. A level stand in the centre of the tower roof with a meridian reference line serves as a base for the cloud mirror.

A Campbell-Stokes sunshine recorder, which has been in operation during 1886, is the standard instrument in Europe for registering sunshine, but it is believed that there are none used in the United States. It consists of a glass ball held in a concentric frame at the distance of the focal radius from the centre of the ball. This frame holds a strip of cardboard which is charred whenever the sun shines brightly, and by the apparent motion of the sun the hours into which the cardboard is divided are successively traversed by its image. The strip is adjusted in the frame to give approximately the standard time of the seventy-fifth meridian.

A Jordan sunshine recorder, made by Negretti and Zambra of London, has also been in use the past year. A brass cylinder, with its axis parallel to the earth's axis, has in its opposite sides two holes through which the sun shines upon sensitized paper, and the traces thus made are rendered permanent by immersing the paper in water. This generally records more sunshine than does the burning instrument, whose action is stopped when the sun is partly obscured by cirrus clouds or light haze.

A cloud mirror for the measurement of the azimuth and altitude of clouds has been used by Mr. Clayton. Frequent measurements, in degrees of azimuth, of the direction of motion of the clouds, particularly those of the cirrus type, have been made but are not ready for publication. The altitude of the clouds is obtained by first calculating their velocity of motion by noting the time which their shadows require to traverse known distances on the plain below. Only clouds of the stratus and cumulus types give shadows which can thus be used. The velocity of a cloud being known, two angular measurements of its altitude, at a definite interval of time apart, enable its height to be calculated.

THE REDUCTION OF THE OBSERVATIONS.

General Results.—The daily results refer to the twenty-four hours ending at 11 P. M. The figures in the first four columns following the date, pages 2 to 7, are the daily means obtained from observations at 7 A. M., 3 and 11 P. M., seventy-fifth meridian time, according to the practice of the Signal Service. Until April, eye observations were taken at these hours; after that, the data for 7 A. M. and 3 P. M. were generally obtained from the sheets of the self-recording instruments, controlled by eye observations of the standard instruments made at least twice a day.

All temperatures are expressed in Fahrenheit degrees.

The table used for the reduction of the barometer to 32° is that computed from Schumacher's formula, and contained in the *Instructions for Voluntary Observers of the Signal Service.* The reduction to sea level from a height of six hundred and forty feet is effected by a table calculated from Laplace's formula, in which the arguments are the temperature of the external air and the height of the barometer corrected to 32°. The correction to reduce to the standard gravity of latitude 45°, is —0.007 inch, which is the constant employed by the Boston Signal Office. The barometer reduced to sea level and standard gravity is only used in the monthly and annual means and extremes. The actual barometer is also given in the means.

The dew point and relative humidity are calculated from the readings of the wet and dry bulb thermometers, by means of the table, computed for a barometric pressure of thirty inches, contained in the above *Instructions;* or inversely, the dew point is calculated from the relative humidity, when such is obtained from the hygrometer.

The hours of actual sunshine are got from the Campbell-Stokes instrument, and the daily percentage of possible sunshine is determined from the average possible duration of sunshine in latitude 42°, which is given for each month in Jelinek's *Anleitung zur Ausführung Meteorologischer Beobachtungen*, revised by Dr. Hann. From the number of hours thus found, thirty minutes are subtracted daily to allow for the time when the sun, on account of its proximity to the horizon, does not affect the register.

The mean cloudiness for the first three months was obtained from tri-daily eye observations. After March it is assumed to be the complement of the percentage of bright sunshine, the cloudiness thus got having been found here and elsewhere to be about four per cent less than that obtained from eye observations. In the Annual Summary, page 8, the mean cloudiness has been obtained from the sunshine for all the months.

The transparency of the air from March to December, inclusive, is indicated by the record of visibility of distant mountains, which subtend about the same visual angle as seen from Blue Hill, the highest mountains being the most distant. The height above the sea of Nobscot is 602 feet; Wachusett, 2,018 feet; and Monadnock, 3,170 feet; their distances from Blue Hill being as stated in the records.

The prevailing direction of the wind and its daily movement are omitted from these tables, because they appear in the Hourly Values, pages 10 to 28. In the Annual Summary, page 8, the table of monthly means and totals is compiled from the preceding monthly sums and means. The figures for sunshine and precipitation, and the number of days with precipitation which are given as yearly means, are, strictly speaking, the monthly averages of these elements for the year. In the table of monthly extremes, the first three columns should be headed "Barometer Reduced to 32°, Sea Level and Standard Gravity," instead of "Pressure," etc., as printed.

Hourly Values from the Self-Recording Instruments. — The tabulation of all the sheets from these instruments has been done by Mr. Clayton, so that the personal equation introduced is nearly constant. The figures in the tables have been added by the arithmometer of Thomas de Colmar. The maximum values are indicated in the sums and means of the pressure and wind velocity, and in the annual summary of the wind direction, by heavy-faced type, and the minimum values by light-faced type. The ten-day means of pressure and wind velocity can be easily obtained from the ten-day sums by moving the decimal point.

The hours of prevalence of each wind, pages 10 to 13, need no special explanation. The anemoscope from which the data are derived gave a continuous record during the year except on Jan. 30, when the action of the vane was impeded by ice, and on thirty-two hours distributed through the year, when the direction of the wind was otherwise obtained. Only two hours of calm are given, but the record of the sensitive electrical anemometer shows that in reality there were no absolute calms of an hour's duration during the year.

The hourly wind movements, pages 16 to 28, are also continuous with the exception of the last four days of January, when both anemometers were stopped by ice. A few other breaks in the Draper record, besides the values for very low velocities, have been supplied by the records of the electrical anemometer. The two hours of calm, before mentioned, however, remain.

The hourly data for the atmospheric pressure, pages 30 to 42, are complete for each hour, the values for four scattered hours, missing from the Draper barograph sheets, having been interpolated. The figures given are the readings, corrected for temperature and instrumental error, the latter being ascertained several times daily, and the correction for each hour interpolated. For economy in printing the hourly values, twenty-nine inches is omitted, unless the pressure for the same hour of the preceding day is twenty-eight or thirty inches; and twenty-nine is to be supplied elsewhere when no whole inches are given. The double diurnal maxima and minima are indicated in the sums and means by heavy and light faced type.

These are among the most complete hourly values of wind velocity and atmospheric pressure which have been published for a few stations in the United States.

A. LAWRENCE ROTCH,

Blue Hill Meteorological Observatory.

MAY, 1887.

GENERAL RESULTS

OF THE

METEOROLOGICAL OBSERVATIONS

MADE AT THE

BLUE HILL METEOROLOGICAL OBSERVATORY,

IN THE

YEAR 1886.

JANUARY.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness.† 0–10	Rainfall. Inches.	Melted Snow. Inches.
1.	29.314	38.0	31.9	77	46.0	31.9	14.1	8 0	90	0	.05	
2.	.681	35.5	31.8	84	45.0	29.0	16.0	8 30	96	4	.02	
3.	.722	36.1	35.1	96	38.0	34.2	3.8	0 0	00	10	Inap.	
4.	.393	43.8	43.5	99	48.3	35.2	13.1	0 0	00	10		
5.	28.864	45.2	44.1	96	50.7	37.2	13.5	0 0	00	10	.76	
6.	28.797	26.3	22.1	72	38.9	16.0	22.9	6 50	76	1		
7.	28.944	13.8	6.6	63	20.8	9.0	11.8	8 0	90	3		
8.	29.164	15.1	6.4	62	25.3	3.5	21.8	8 20	93	5		
9.	28.182	19.3	19.3	95	30.0	6.0	24.0	0 0	00	10		.45
10.	28.633	7.3	0.6	58	12.8	2.0	10.8	4 45	53	2		
11.	29.187	4.6	-1.6	57	11.0	-1.7	12.7	3 5	34	3		
12.	.597	-6.5	-10.2	54	1.1	-15.0	16.1	8 50	97	0		
13.	.856	6.2	0.9	53	14.0	-6.9	20.9	6 30	71	1		
14.	30.020	12.2	2.2	52	20.0	2.2	17.8	8 45	96	0		
15.	29.824	23.7	8.5	45	32.8	10.8	22.0	9 0	100	3		
16.	.470	25.4	22.8	86	31.7	14.0	17.7	0 45	08	10	Inap.	
17.	.069	28.6	22.2	72	37.3	23.0	14.3	3 35	39	5		
18.	.428	22.0	7.3	46	27.0	17.9	9.1	6 30	71	6		
19.	.295	27.0	26.9	91	39.9	18.0	21.9	0 0	00	7	.52	.03
20.	.639	25.4	16.9	57	31.0	20.0	11.0	8 30	93	1		
21.	.385	31.1	27.2	79	40.5	23.9	16.6	0 0	00	10	.14	
22.	.174	31.6	31.6	100	32.9	29.2	3.7	0 0	00	10		
23.	.471	16.3	8.5	44	33.1	3.1	30.0	8 0	88	2		
24.	.742	2.4	0.0	74	4.7	-3.5	8.2	0 0	00	10		.12*
25.	.586	17.5	17.5	77	32.2	3.1	29.1	0 0	00	10		.50*
26.	.440	29.0	26.6	91	37.0	20.9	16.1	2 20	25	4	.03*	
27.	.450	27.3	26.0	94	32.7	23.5	9.2	0 0	00	10	.05*	
28.	.062	31.2	31.2	100	33.2	25.9	7.3	0 0	00	10	1.36*	
29.	28.733	29.5	29.5	99	31.9	27.4	4.5	0 0	00	10	.28*	
30.	28.702	30.4	30.4	93	32.7	27.2	5.5	0 40	07	10	.61*	
31.	29.034	22.3	20.6	81	31.9	15.0	16.9	7 20	79	7		.24
Sums.								118 15			3.83	1.34
Means.	29.286	23.1	18.9	76.3	30.5	15.5	15.0	3 48	42	6.0		
Red. to Sea Level and Stan. Gravity.	30.018	Mean (Max. and Min.) .			23.0		Total Precipitation				5.17	

* Proportioned by means of Boston Signal Service record.
† Obtained from tri-daily eye observations.

FEBRUARY.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness.† 0–10	Rainfall.* Inches.	Melted Snow.* Inches.
1.	29.169	18.4	15.0	79	28.5	10.0	18.5	1 50	19	5		.02
2.	.360	13.9	8.0	64	21.5	5.5	16.0	9 0	90	1		
3.	.496	6.9	4.2	76	17.1	3.7	13.4	0 0	00	10		.02
4.	.240	-0.4	-3.8	70	6.0	-4.3	10.3	0 0	00	8		.08
5.	.500	-5.2	-10.8	58	0.2	-9.8	10.0	9 05	91	3		
6.	.527	4.8	0.0	68	15.4	-7.3	22.7	6 15	62	6		
7.	.372	19.8	15.3	79	27.3	8.3	19.0	2 30	25	8		
8.	.218	29.1	21.7	74	36.4	18.7	17.7	9 15	92	3		
9.	.427	39.7	29.1	67	54.3	31.0	23.3	9 45	97	1		
10.	.843	33.7	32.9	94	35.9	27.5	8.4	0 0	00	10		
11.	.863	32.8	32.7	99	33.8	32.1	1.7	0 0	00	10	.71	
12.	.367	45.8	45.8	100	52.4	32.1	20.3	0 0	00	10	4.85	
13.	28.853	47.3	46.8	100	55.4	39.8	15.6	0 0	00	10	.57	
14.	29.120	40.5	34.4	80	49.5	33.8	15.7	6 15	62	2	Inap.	
15.	.182	46.0	40.4	76	54.8	35.5	19.3	5 20	53	6		
16.	.414	26.3	14.0	47	47.4	17.6	29.8	8 0	80	6		
17.	.541	18.6	9.2	62	25.1	13.0	12.1	7 25	73	3		
18.	.398	30.5	19.0	54	40.2	18.9	21.3	8 45	86	6		
19.	.059	36.8	32.4	86	43.1	28.0	15.1	3 45	37	9	.56	
20.	28.671	22.6	18.0	74	38.8	10.3	28.5	1 05	11	6		Inap.
21.	29.196	15.1	3.2	56	22.5	4.8	17.7	3 30	34	7		Inap.
22.	.346	21.2	16.9	77	28.4	14.1	14.3	8 0	78	2		
23.	.276	29.9	21.8	69	38.7	21.4	17.3	1 20	13	7		Inap.
24.	.668	13.3	-2.3	42	24.0	9.0	15.0	10 10	100	0		
25.	.028	30.0	28.5	91	44.3	15.0	29.3	0 0	00	10	.40	.50
26.	28.372	15.9	15.2	95	43.1	5.1	38.0	0 0	00	10	.58	
27.	28.746	5.2	-4.7	47	9.7	0.2	9.5	5 30	54	6		
28.	28.950	11.4	-3.0	54	21.6	5.0	16.6	10 30	100	0		
Sums.								127 15			7.67	0.62
Means.	29.257	23.2	17.6	72.8	32.7	15.0	17.7	4 47	45	5.9		
Red. to Sea Level and Stan. Gravity.	29.990	Mean (Max and Min.) .			23.8		Total Precipitation				8.29	

* The daily amounts are proportioned by means of the Boston record.
† Obtained from tri-daily eye observations.

MARCH.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness.† 0–10	Rainfall. Inches.	Melted Snow. Inches.
1.	28.960	1.3	-7.2	64	9.0	-3.0	12.0	10 0	88	3		.01
2.	28.716	11.1	4.7	67	19.0	-3.0	22.0	2 10	20	8		
3.	28.976	21.2	11.3	68	29.1	12.2	16.9	1 10	10	8		
4.	29.118	28.5	20.1	70	37.8	13.7	24.1	10 15	90	0		
5.	.091	27.3	18.6	71	37.0	21.5	15.5	7 30	66	7		
6.	.099	27.3	13.1	61	30.7	20.8	9.9	10 40	94	0		
7.	.225	23.4	16.7	55	31.5	16.2	15.3	10 40	94	2		
8.	.135	30.4	23.3	77	38.8	20.4	18.4	0 15	02	9		.02
9.	.120	21.6	18.2	78	30.8	14.8	16.0	2 30	22	8		.01
10.	.238	23.1	14.6	54	33.0	12.3	20.7	9 30	83	3		
11.	.222	31.1	15.8	49	43.5	18 4	25.1	10 10	89	3		
12.	28.858	35.5	26.7	71	42.5	29.4	13.1	0 0	00	9	.02	
13.	28.628	33.9	33.8	98	39.9	32.0	7.9	0 0	00	10	.28	
14.	29.149	31.5	20.2	60	39.9	22.5	17.4	8 45	77	7		
15.	.349	34.6	26.6	70	42.8	29.3	13.5	6 0	52	4		
16.	.212	35.9	28.4	73	49.0	29.0	20.0	2 30	20	10	.08	
17.	.517	29.4	20.4	68	36.7	24.6	12.1	11 15	98	1		
18.	.458	36.7	21.1	53	49.0	25.5	23.5	9 40	84	7		
19.	.398	29.4	24.4	73	36.1	25.1	11.0	5 30	49	7		.20
20.	.191	32.8	32.8	100	34.6	27.3	7.3	0 0	00	10	.32	
21.	28.721	32 8	32.8	100	37.5	28.8	8.7	0 0	00	10	1.18	
22.	28.622	34.3	29.1	85	44.6	28.6	16.0	1 45	15	10	Inap.	
23.	28.778	30.0	21.5	66	37.3	23.4	13.9	1 30	14	9	.02	
24.	29.169	26.0	14.4	55	34.2	19.0	15.2	9 45	85	4		
25.	.272	36.1	25.7	60	42.2	23.8	18.4	0 50	07	9	Inap.	
26.	.268	43.3	19.5	34	51.5	37.4	14.1	5 40	50	8		
27.	.498	37.8	30.6	68	47.1	31.3	15.8	0 0	00	10		.28
28.	.650	33.5	32.0	88	38.6	30.5	8.1	2 5	18	6	.02	
29.	.710	35.5	31.1	85	42.6	28.0	14.6	4 0	35	8	.12	
30.	.372	39.0	39.0	100	41.8	34.8	7.0	0 0	00	10	.38	
31.	.272	55 7	54.1	95	59.0	41.2	17.8	0 0	00	10	.11	
Sums.								144 05			2.53	.52
Means.	29.161	30.6	23.0	71.5	38.3	23.1	15.2	4 40	41	6.8		
Red. to Sea Level and Stan. Gravity.	29.879	Mean (Max. and Min.) .			30.7		Total Precipitation				3.05	

† Obtained from tri-daily eye observations.

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles). — 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 14, 16, 17, 18, 21, 23, 25, 26.
WACHUSETT (distant 44 miles). — 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 17, 18, 22, 23, 25, 26.
MONADNOCK (distant 68 miles). — 1, 2, 3, 4, 5, 6, 7, 10, 16, 18, 22, 23, 25, 26.

APRIL.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0–10	Rainfall. Inches.	Melted Snow. Inches.
1.	29.124	43.8	35.8	74	58.0	37.0	21.0	0 0	00	10	.06	
2.	.278	40.8	25.7	60	56.4	32.9	23.5	11 30	90	1		
3.	.425	30.0	27.8	83	35.6	28.4	7.2	1 2	00	10		.14
4.	.506	28.0	20.7	73	32.8	24.4	8.4	0 0	00	10		Inap.
5.	.549	32.5	25.2	74	37.1	26.3	10.8	0 0	00	10	.06	Inap.
6.	.056	35.3	35.3	100	44.5	32.2	12.3	0 0	00	10	1.72	
7.	.105	34.9	34.6	98	43.5	31.4	12.1	0 0	00	10	.02	
8.	.319	32.7	27.7	82	38.0	28.5	9.5	0 15	02	10		Inap.
9.	.437	45.4	22.0	47	61.9	26.5	35.4	11 50	92	1		
10.	.461	47.9	28.2	49	64.3	37.0	27.3	7 0	54	4		
11.	.850	34.9	23.5	66	42.0	30.5	11.5	11 30	89	1		
12.	.747	46.7	42.2	82	58.0	30.7	27.3	3 0	23	8		
13.	.510	53.5	50.5	88	60.1	47.1	13.0	0 2	00	10	.03	
14.	.581	48.9	40.2	74	57.2	44.7	12.5	7 15	56	4		
15.	.676	50.1	39.5	69	67.0	36.5	30.5	5 10	40	6		
16.	.845	38.9	36.3	88	45.9	35.3	10.6	5 30	43	6		
17.	.814	47.0	38.0	74	64.2	36.5	25.7	7 50	62	4		
18.	.666	55.8	34.0	47	72.5	40.3	32.2	11 50	93	1		
19.	.557	61.9	45.3	57	72.3	49.1	23.2	12 30	97	0		
20.	.573	47.7	42.0	79	56.8	44.5	12.3	2 5	16	8		
21.	.389	58.8	44.5	60	73.9	44.3	29.6	11 0	85	2		
22.	.353	54.9	43.8	64	62.0	50.7	11.3	10 20	80	2		
23.	.139	63.5	49.0	56	78.9	45.8	33.1	12 0	93	1		
24.	.154	56.2	46.2	69	69.6	47.7	21.9	1 0	08	9	.06	
25.	.363	48.5	37.2	57	53.5	40.8	12.7	9 35	74	3		
26.	.223	54.0	31.2	46	68.2	41.7	26.5	10 50	84	2		
27.	.271	45.7	32.8	60	53.7	40.8	12.9	7 5	54	4	.02	
28.	.196	45.4	41.5	84	51.5	39.3	12.2	2 40	21	8	.05	
29.	.284	45.6	33.0	61	51.7	41.9	9.8	7 20	57	4		
30.	.316	43.4	35.8	75	48.1	39.6	8.5	8 10	64	4		
Sums.								177 19			2.02	.14
Means.	29.426	45.8	35.5	70.0	56.0	37.7	18.3	5 55	46	5.4		
Red. to Sea Level and Stan. Gravity.	30.126	Mean (Max. and Min.) .			46.8		Total Precipitation				2.16	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles). — 1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 30.
WACHUSETT (distant 44 miles). — 1, 2, 3, 4, 8, 9, 10, 11, 12, 23, 24, 25, 26, 27, 28, 30.
MONADNOCK (distant 68 miles). — 9, 10, 11, 26.

MAY.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0-10	Rainfall. Inches.	Melted Snow. Inches.
1.	29.254	46.5	33.0	62	58.9	38.4	20.5	13 0	96	5		
2.	.260	40.7	35.3	82	43.8	37.6	6.2	12 15	90	1		
3.	.357	50.2	34.7	56	66.4	34.5	31.9	10 45	79	2		
4.	.263	56.4	41.8	60	74.2	43.2	31.0	8 20	62	4	Inap.	
5.	.123	59.1	49.8	74	76.6	47.2	29.4	4 0	28	7	.45	
6.	.224	55.6	40.7	60	66.8	45.8	21.0	6 15	46	5		
7.	.280	58.9	45.7	59	71.2	47.3	23.9	9 45	72	3		
8.	.047	46.3	46.3	100	52.8	44.8	8.0	0 0	00	10	1.48	
9.	.096	53.1	39.5	61	65.2	43.6	21.6	10 30	77	2	.12	
10.	.369	52.7	41.2	69	65.7	45.3	20.4	8 45	65	4	.20	
11.	.345	43.0	41.7	95	46.1	41.4	4.7	0 0	00	10	.24	
12.	.307	43.5	41.0	92	51.0	39.5	11.5	1 15	09	9	Inap.	
13.	.269	42.0	42.0	98	44.8	39.4	5.4	0 0	00	10		
14.	.353	46.0	41.9	87	55.1	41.2	13.9	6 30	48	5		
15.	.255	50.5	45.5	84	61.0	40.4	20.6	5 10	38	6	.01	
16.	.153	56.0	50.0	82	66.1	48.3	17.8	3 20	25	7	.74	
17.	.474	52.2	34.3	52	58.9	40.8	18.1	12 0	88	1		
18.	.610	54.1	38.2	56	64.1	45.8	18.3	8 15	61	4		
19.	.491	53.4	47.5	79	62.8	47.9	14.9	4 30	33	7		
20.	.218	60.9	55.0	75	71.8	46.9	24.9	8 0	59	4	.04	
21.	.232	61.7	36.4	40	69.8	50.8	19.0	14 20	100	0		
22.	.154	64.0	54.2	63	74.8	51.4	23.4	3 30	25	8	Inap.	
23.	103	68.6	49.8	53	80.6	57.7	22.9	12 10	90	1		
24.	.036	60.8	48.0	65	68.7	56.8	11.9	0 0	00	10	Inap.	
25.	28.847	50.2	44.5	79	57.5	44.8	12.7	0 0	00	10	.28	
26.	28.966	47.6	33.8	59	53.3	40.8	12.5	6 10	45	6	.01	
27.	28.989	50.8	42.7	70	64.7	45 8	18.9	5 10	38	6	.01	
28.	29.106	55.9	42.4	60	67.1	47.8	19.3	12 20	91	1		
29.	.220	63.2	45.0	53	73.1	49.9	23.2	13 30	98	0		
30.	.133	68.5	51.5	60	81.7	55.4	26.3	10 30	77	2	Inap.	
31.	.254	60.1	49.7	66	67.8	55.4	12.4	9 30	70	3	.35	
Sums.								219 45			3.94	.00
Means.	29.219	54.0	43.3	69.4	64.0	45.7	18.3	7 5	52	4.9		
Red. to Sea Level and Stan. Gravity.	29.896	Mean (Max. and Min.) .			54.8	Total Precipitation					3.94	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles). — 1, 2, 3, 4, 5, 6, 7, 9, 10, 14, 15, 16, 17, 18, 20, 21, 22, 26, 27, 28, 29, 30.
WACHUSETT (distant 44 miles). — 6, 7, 9, 10, 14, 15, 16, 17, 18, 21, 26.
MONADNOCK (distant 68 miles). — 6, 7, 9, 15, 16, 17, 18, 21, 26.

JUNE.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0-10	Rainfall. Inches.	Melted Snow. Inches.
1.	29.423	59.3	44.2	60	71.8	52.8	19.0	12 20	84	2		
2.	.335	62.8	54.1	74	71.0	52.1	18.9	5 10	35	7		
3.	.183	58.8	52.2	77	64.5	53.7	10.8	0 10	01	10	.61	
4.	.397	58.0	43.4	60	69.3	47.5	21.8	11 0	75	3		
5.	.387	59.0	45.0	61	71.5	49.6	21.9	12 50	87	1		
6.	.427	63.2	51.6	66	77.2	48.3	28.9	7 40	52	5		
7.	.391	59.9	49.5	72	65.7	54.2	11.5	0 0	00	10		
8.	.333	62.2	42.6	52	72.5	52.7	19.8	14 15	97	0		
9.	.240	64.0	50.7	67	75.3	53.7	21.6	10 0	70	3	.01	
10.	.010	66.0	55.5	73	81.2	51.7	29.5	8 20	56	4	.31	
11.	.213	64.0	55.4	73	72.2	57.0	15.2	10 0	68	3		
12.	.442	53.5	48.5	81	62.4	51.9	10.5	8 30	58	4		
13.	.421	52 1	50.3	96	54.3	49.5	4.8	0 0	00	10	.24	
14.	.370	53.1	49.8	87	56.0	49.1	6.9	0 0	00	10	.07	
15.	.318	58.1	56.1	91	64.1	51.8	12.3	0 0	00	10	.01	
16.	.144	67.0	61.5	82	78.3	55.7	22.6	7 15	50	5		
17.	28.876	67.8	65.4	92	74.0	62.7	11.3	0 5	01	10	.01	
18.	29.103	60.2	42.5	55	68.7	53.8	14.9	5 20	36	6		
19.	.433	56.2	41.8	59	63.3	48.4	14.9	7 20	50	5		
20.	.526	63.5	47.5	58	75.3	50.2	25.1	14 25	98	0		
21.	.560	67.0	49.0	59	80.9	56.0	24.9	14 20	98	0		
22.	.409	64.8	53.2	70	75.0	55.8	19.2	0 10	01	10		
23.	.267	59.8	57.4	92	69 0	55.0	14.0	0 0	00	10	.05	
24.	.262	56.7	56.7	100	57.9	55.4	3.5	0 0	00	10	.15	
25.	.180	60.0	60.0	98	65.0	56.4	8·6	0 0	00	10	.04	
26.	.017	65.5	57.1	78	75.0	58.0	17.0	10 50	74	3	.02	
27.	.129	62.6	52.7	73	74.9	54.8	20.1	8 40	59	4		
28.	.312	58.3	53.9	85	67.0	53.2	13.8	5 20	36	6		
29.	.225	67.3	50.5	54	77.9	54.0	23.9	13 45	94	1		
30.	.445	63.5	51.4	50	70.9	54.7	16.2	14 45	100	0		
Sums.								202 30			1.52	00
Means.	29.293	61.1	51.4	73.2	70.1	53.3	16.8	6 45	46	5.4		
Red. to Sea Level and Stan. Gravity.	29.966	Mean (Max. and Min.) .			61.7	Total Precipitation					1.52	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles). — 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 20, 21, 23, 26, 27, 28, 29, 30.
WACHUSETT (distant 44 miles). — 3, 5, 9, 10, 16, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30.
MONADNOCK (distant 68 miles). — 18, 19, 20, 27, 28, 29, 30.

JULY.

Day of Month.	Barom. Red. to 32°.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0-10	Rainfall. Inches.	Melted Snow.
1.	29.516	66.5	47.0	52	78.0	56.4	21.6	14 20	100	0		
2.	.410	67.2	55.9	61	79.8	56.0	23.8	3 0	21	8		
3.	.349	74.7	61.5	64	87.0	61.2	25.8	12 45	92	0		
4.	.461	70.4	59.1	72	87.0	58.2	28.8	11 0	79	2		
5.	.476	69.8	62.1	76	82.4	61.3	21.1	11 10	81	2		
6.	.341	77.1	62.6	65	91.0	65.8	25.2	8 10	58	4		
7.	.126	80.2	65.1	61	90.5	69.4	21.1	7 15	52	5		
8.	.305	73.4	56.4	58	83.1	62.9	20.2	11 20	81	2		
9.	.375	65.2	51.3	66	74.1	58.8	15.3	10 30	77	2		
10.	.212	59.6	57.9	93	69.6	58.2	11.4	0 10	01	10	Inap.	
11.	.133	66.9	53.3	65	80.0	58.2	21.8	11 20	81	2		
12.	.238	62.1	45.1	60	75.2	50.0	25.2	13 0	94	1		
13.	.338	65.7	51.5	66	80.5	54.7	25.8	13 30	97	0		
14.	.373	62.7	60.1	88	70.3	59.7	10.6	1 0	07	9	Inap.	
15.	.263	70.0	66.6	89	77.5	60.6	16.9	2 0	14	9	1.11	
16.	.255	69.1	67.6	93	75.0	66.7	8.3	0 0	00	10	.34	
17.	.251	71.5	67.1	82	82.4	66.0	16.4	8 15	60	4	.28	
18.	.234	68.4	63.2	84	77.6	63.0	14 6	4 35	33	7		
19.	.095	67.2	57.8	73	75.7	60.1	15.6	12 25	90	1	.02	
20.	.067	65.9	56.7	70	74.9	56.8	18.1	9 10	66	3		
21.	.135	64.8	59.1	78	73.1	58.6	14.5	1 35	12	9		
22.	.179	68.7	48.6	57	78.6	57.6	21.0	13 10	95	1		
23.	.369	65.7	49.2	57	77.3	55.6	21.7	10 50	78	2		
24.	.404	66.4	50.7	58	76.0	58.1	17.9	13 20	97	1		
25.	.328	65.8	59.6	80	75.1	58.8	16.3	2 5	15	8		
26.	.199	69.9	66.1	85	75.8	61.2	14.6	0 20	02	10	Inap.	
27.	.071	68.4	67.3	93	74.0	66.0	8.0	0 50	06	9	.13	
28.	.148	70.4	61.4	73	81.2	63.0	17.6	12 20	90	1		
29.	.190	73.8	62.1	73	86.2	63.5	22.7	9 45	71	3	.19	
30.	.206	73.6	69.4	88	82.1	65.0	17.1	4 15	31	7	.11	
31.	.274	68.8	64.8	85	77.6	63.3	14.3	3 20	24	8	.08	
Sums.								236 55			2.26	00
Means.	29.269	68.7	58.9	73.1	79.0	60.5	18.5	7 39	54	4.6		
Red. to Sea Level and Stan. Gravity.	29.930	Mean (Max. and Min.) .			69.7	Total Precipitation					2.26	

AUGUST.

Day of Month.	Barom. Red. to 32°.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0-10	Rainfall. Inches.	Melted Snow.
1.	29.173	69.5	64.5	85	80.8	61.0	19.8	8 30	60	4		
2.	28.875	69.0	56.6	69	79.8	61.3	18.5	8 35	62	4	.33	
3.	29.018	56.5	47.4	73	62.5	51.0	11.5	8 0	60	4		
4.	.258	63.7	48.3	62	74.1	53.1	21.0	10 20	77	2		
5.	.353	62.9	51.0	68	75.0	54.0	21.0	11 50	89	1	.07	
6.	.353	63.7	58.7	83	73.6	56.1	17.5	4 30	34	7	.39	
7.	.333	60.0	59.5	96	67.6	57.2	10.4	1 10	09	9	.52	
8.	.441	64.4	56.7	79	75.3	54.6	20.7	8 15	62	4	.65	
9.	.606	70.2	60.2	73	82.3	60.8	21.5	10 15	77	2		
10.	.451	69.1	58.0	70	81.6	60.8	20.8	12 20	92	1		
11.	.133	71.5	64.9	80	83.2	61.9	21.3	5 0	38	6		
12.	.141	73.5	61.9	68	81.5	61.2	20.3	6 5	46	5	.42	
13.	.268	70.9	58.9	65	79.2	65.0	14.2	12 15	92	1		
14.	.049	69.8	61.8	76	79.6	63.7	15.9	3 40	28	7	.03	
15.	.316	63.5	42.2	48	71.1	53.9	17.2	13 15	100	0		
16.	.227	65.0	52.5	67	74.1	59.6	14.5	4 10	31	7	.32	
17.	.207	58.5	55.7	90	68.0	55.3	12.7	3 02	22	8	.11	
18.	.465	58.4	53.3	80	67.8	53.8	14.0	12 50	96	1		
19.	.570	62.1	53.6	73	72.0	54.2	17.8	7 50	59	4		
20.	.659	62.7	48.3	61	73.0	55.6	17.4	12 40	95	0		
21.	.567	61.4	50.8	61	73.1	53.3	19.8	11 40	88	1		
22.	.317	55.3	45.5	68	64.0	50.5	13.5	12 45	96	0		
23.	.249	66.2	52.7	64	80.4	50.6	29.8	13 0	98	0		
24.	.320	70.0	62.3	78	81.3	57.8	23.5	11 10	84	2		
25.	.350	58.8	57.0	93	66.9	55.0	11.9	2 15	17	8	.02	
26.	.269	68.4	58.7	73	80.9	53.4	27.5	11 20	85	2		
27.	.253	75.0	61.8	68	87.0	53.5	33.5	9 10	69	3		
28.	.209	75.8	65.5	70	88.1	66.0	22.1	8 15	62	4		
29.	.255	64.2	60.2	86	71.5	59.2	12.3	7 56	56	4		
30.	.202	65.0	65.0	100	69.4	59.3	10.1	0 0	00	10	.11	
31.	.094	64.4	63.3	96	78.6	57.8	20.8	1 30	11	9	.98	
Sums.								253 31			3.95	00
Means.	29.290	65.4	56.7	75.0	75.6	57.1	18.5	8 11	61	3.9		
Red. to Sea Level and Stan. Gravity.	29.956	Mean (Max. and Min.) .			66.3	Total Precipitation					3.95	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles).—1, 2, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 20, 23, 24, 25, 26, 27, 29, 30, 31.

WACHUSETT (distant 44 miles).—1, 7, 11, 12, 13, 23, 24, 29.

MONADNOCK (distant 68 miles).—1, 7, 11, 23, 24.

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles).—1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 31.

WACHUSETT (distant 44 miles).—2, 3, 4, 8, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.

MONADNOCK (distant 68 miles).—3, 4, 15.

SEPTEMBER.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0-10	Rainfall. Inches.	Melted Snow.
1.	29.340	59.2	45.7	60	67.8	54.0	13.8	9 0	75	3		
2.	.738	58.1	46.3	63	74.1	49.5	24.6	9 45	90	1		
3.	.774	57.2	50.4	79	75.0	52.0	23.0	12 0	100	0		
4.	.747	57.8	55.2	90	64.5	51.0	13.5	0 0	00	10		
5.	.697	61.6	57.6	84	67.1	56.8	10.3	7 30	63	4		
6.	.702	67.9	63.6	87	76.1	61.6	14.5	4 30	37	6		
7.	.651	70.8	65.8	86	81.6	65.5	16.1	9 0	75	3		
8.	.499	70.2	63.2	82	80.9	63.6	17.3	9 20	78	2		
9.	.354	71.0	65.2	83	81.6	64.4	17.2	7 50	65	4	.01	
10.	.203	62 5	62.4	100	68.2	61.0	7.2	0 0	00	10	.46	
11.	.207	68.0	55.0	67	76.3	61.0	15.3	6 15	51	5		
12.	.129	64.1	54.0	70	76.2	57.4	18.8	8 0	67	3	.08	
13.	.220	57.2	42.9	59	66.0	52.0	14.0	11 25	96	1	.27	
14.	.374	61.9	51.0	68	69.6	50.5	19.1	9 20	78	2		
15.	.589	59.8	55.7	84	68.7	57.9	10.8	10 40	90	1		
16.	.574	60.9	59.1	98	64.3	57.8	6.5	0 0	00	10	.10	
17.	.396	69.0	67.4	93	74.5	64.3	10.2	2 0	17	8	.34	
18.	.642	61.7	42.5	49	69.0	57.9	11.1	11 30	96	0		
19.	.376	61.6	58.3	87	67.9	53.3	14.6	4 5	35	7	.04	
20.	.264	51.3	38.3	60	68.0	43.3	24.7	10 5	85	2		
21.	.410	48.8	32.0	56	61.0	38.5	22.5	11 0	90	1		
22.	.560	47.2	33.8	60	57.1	37.7	19.4	10 15	87	2		
23.	.443	49.0	49 0	100	51.8	47.5	4.3	0 0	00	10	1.51	
24.	.507	56.5	47.5	75	67.3	46.0	21.3	7 30	61	4		
25.	.606	49.6	42.5	76	56.2	47.7	8.5	6 50	58	4		
26.	.249	65.8	62.0	88	74.5	49.6	24.9	2 50	24	8		
27.	.268	63.8	55.4	78	74.2	53.9	20.3	6 20	54	5	.01	
28.	.220	62.6	62.4	100	67.0	53.5	13.5	0 0	00	10	.26	
29.	.260	56.4	50.0	75	66.5	52.3	14.2	3 0	25	7	Inap.	
30.	.224	53.6	47.9	82	59 0	47.9	11.1	1 0	09	9	Inap.	
Sums.								191 0			3.08	00
Means.	29.440	60.2	52.7	78.0	69.1	53.7	15.4	6 22	53	4.7		
Red. to Sea Level and Stan. Gravity.	30.118	Mean (Max. and Min.) .			61.4		Total Precipitation				3.08	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distance 20 miles).—2, 3, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30.
WACHUSETT (distant 44 miles).—2, 7, 9, 11, 12, 13, 14, 18, 19, 20, 21, 22, 27, 29.
MONADNOCK (distant 68 miles).—11, 13, 18, 20, 22, 27, 29.

OCTOBER.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0-10	Rainfall. Inches.	Melted Snow.
1.	29.138	47.8	37.0	72	64.9	40.5	24.4	5 25	48	5		
2.	.553	40.8	28.2	63	51.9	32.8	19.1	8 35	78	2		
3.	.659	47.2	32.4	57	58.1	38.5	19.6	11 0	100	0		
4.	.375	54.1	41.2	61	66.0	41.0	25.0	9 20	88	1		
5.	.478	50.4	43.3	77	56.1	46.0	10.1	9 10	87	1		
6.	.422	55.0	42.0	61	64.2	44.7	19.5	9 40	89	1		
7.	.547	48.7	45.2	86	54.3	45.3	9.0	4 0	39	6		
8.	.529	56.3	44.8	71	69.6	45.0	24.6	10 5	96	0		
9.	.447	65.4	50.5	62	76.0	51.4	24.6	10 5	96	0		
10.	.551	59.4	46.8	63	65.3	55.6	9.7	9 25	90	1		
11.	.506	60.9	44.6	59	73.3	53.2	20.1	8 15	79	2		
12.	.253	63.9	50.5	67	76.6	54.5	22.1	6 50	65	4	.04	
13.	.452	47.5	44.2	83	61.0	45.7	15.3	0 0	00	10		
14.	.369	53.0	45.2	73	60.2	43.9	16.3	9 0	86	2	Inap.	
15.	.072	57.5	44.5	68	69.2	46.4	22.8	3 0	27	7	.04	
16.	.494	34.2	18.5	53	46.4	28.1	18.3	9 30	90	1		
17.	.656	37.7	24.0	56	46.3	24.6	21.7	7 40	73	3		
18.	.666	46.0	42.2	84	48.9	42.9	6.0	0 0	00	10	.11	
19.	.859	43.7	36.3	75	50.2	39.3	10.9	4 15	40	6		
20.	.647	52.0	47.1	84	61.1	40.7	20.4	7 0	67	3		
21.	.326	52.4	37.8	63	62.0	43.0	19.0	3 5	30	7	Inap.	
22.	.331	50.3	32.6	56	60.8	37.5	23.3	10 20	100	0		
23.	.514	44.5	27.9	59	54.5	40.0	14.5	10 18	100	0		
24.	.728	38.3	30.7	76	45.0	33.7	11.3	9 30	91	1		
25.	.540	52.0	46.8	84	56.4	37.5	18.7	0 15	02	10	Inap.	
26.	.707	45.7	44.6	93	50.2	43.1	7.1	0 40	06	9	.01	
27.	.500	44.2	44.2	100	45.5	42.6	2.9	0 0	00	10	1.79	
28.	.254	44.5	44.5	100	47.8	39.1	8.7	0 0	00	10	.15	
29.	.286	47.6	47.6	100	49.0	45.9	3.1	0 0	00	10	.61	
30.	.221	45.7	45.5	100	48.1	40.8	7.3	0 0	00	10	1.64	
31.	.150	48.2	48.2	100	51.1	46.0	5.1	0 25	04	10	.48	
Sums.								176 38			4.87	00
Means.	29.459	49.5	40.6	74.4	57.7	42.2	15.5	5 42	54	4.6		
Red. to Sea Level and Stan. Gravity.	30.152	Mean (Max. and Min.) .			50.0		Total Precipitation				4.87	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles).—1, 2, 3, 4, 6, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26.
WACHUSETT (distant 44 miles).—1, 2, 3, 14, 15, 16, 17, 21, 22, 23, 24.
MONADNOCK (distant 68 miles).—1, 2, 3, 16, 17, 22, 23, 24.

NOVEMBER.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0–10	Rainfall. Inches.	Melted Snow. Inches.
1.	29.266	50.3	47.1	85	57.6	45.1	12.5	3 30	35	6		
2.	.415	52.1	42.0	70	62.0	45.3	16.7	7 30	80	2		
3.	.323	53.7	50.5	89	63.0	43.3	19.7	3 40	40	6		
4.	.308	49.0	34.2	62	56.5	39.2	17.3	6 10	62	4		
5.	.532	47.3	35.4	62	55.0	36.4	18.6	9 35	100	0		
6.	.210	49.4	49.3	100	57.0	45.5	11.5	0 0	00	10	.28	
7.	28.862	36.5	23.7	61	55.1	27.2	27.9	8 5	87	1	.44	
8.	29.215	28.3	16.7	62	37.1	22.5	14.6	8 0	86	2		
9.	.422	37.1	23.5	60	45.9	25.4	20.5	5 45	61	4		
10.	.388	39.9	35.1	83	48.2	34.3	13.9	0 10	02	10	.10	
11.	.379	44.2	36.3	75	52.0	37.0	15.0	1 55	20	8		
12.	.352	38.1	34.2	84	45.1	35.8	9.3	0 35	06	9	.18	
13.	28.736	34.1	34.0	100	44.6	27.7	17.0	0 0	00	10	.88	.18
14.	29.036	30.2	22.7	70	34.6	26.4	8.2	8 20	89	1		
15.	.357	36.7	22.3	60	42.0	30.0	12.0	8 20	89	1		
16.	.680	32.1	13.2	45	38.5	27.1	11.4	7 35	81	2		
17.	.477	43.2	38.4	85	51.0	29.3	21.7	0 0	00	10	.18	
18.	28.925	52.4	45.5	80	62.6	37.1	25.0	0 10	02	10	.20	
19.	29.043	34.1	17.8	50	40.0	30.6	9.4	5 0	54	5		
20.	.114	38.2	21.0	50	45.2	30.2	15.0	6 30	70	3		
21.	.289	37.6	25.0	63	45.9	33.5	12.4	8 15	90	1		
22.	.489	36.6	22.6	58	43.0	28.7	14.3	9 15	99	0		
23.	.001	47.3	46.5	97	56.2	34.1	22.1	0 0	00	10	.38	
24.	.025	42.4	32.1	67	60.0	32.0	28.0	8 45	94	1		
25.	.087	33.6	28.7	83	48.2	30.0	18.2	0 0	00	10	.32	
26.	.402	30.9	21.7	65	36.5	26.6	9.9	7 30	80	2	.02	
27.	.549	29.1	18.7	63	37.0	23.4	13.6	7 30	80	2		
28.	.428	32.1	22.5	63	39.0	22.1	16.9	4 45	41	6		
29.	.224	43.2	36.6	78	51.7	33.0	18.7	3 15	35	7		
30.	.054	43.4	42.9	98	47.5	41.7	5.8	0 0	00	10	Inap.	
Sums.								140 5			2.98	.18
Means.	29.253	40.1	31.3	72.3	48.6	32.7	15.9	4 40	49	5.1		
Red. to Sea Level and Stan. Gravity.	29.957	Mean (Max. and Min.) .			40.6		Total Precipitation				3.16	

DECEMBER.

Day of Month.	Barom. Red. to 32°. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range. °	Sunshine. H'rs. Min.	Sunshine. Per cent.	Cloudiness. 0–10	Rainfall. Inches.	Melted Snow. Inches.
1.	28.916	34.9	29.2	77	47.0	28.2	18.8	3 30	40	6	.11	
2.	28.816	19.6	9.5	65	31.5	13.9	17.6	5 05	58	4		.09
3.	29.223	12.7	−2.0	51	18.8	9.0	9.8	7 45	89	1		
4.	.711	12.4	−5.8	45	21.2	8.0	13.2	7 25	85	2		
5.	.672	10.0	3.0	76	14.2	3.3	10.9	0 0	00	10		1.00
6.	.439	21.4	14.5	75	28.9	11.0	17.9	0 0	00	10		.02
7.	.267	19.4	17.5	72	28.0	15.2	12.8	0 0	00	10		.38
8.	.420	25.1	15.1	65	31.5	15.4	16.1	8 35	99	0		
9.	.645	31.7	21.6	64	38.0	26.7	11.3	8 0	92	1		
10.	.592	34.6	24.7	66	40.3	25.4	14.9	7 0	81	2		
11.	.483	39.6	29.2	67	46.6	32.4	14.2	6 20	73	3		
12.	.407	37.0	35.2	92	40.0	35.2	4.8	0 0	00	10	Inap.	
13.	28.851	30.4	30.4	100	37.0	27.2	9.8	0 0	00	10	.15	
14.	28.851	30.1	21.5	70	36.0	23.0	13.0	4 50	56	4		
15.	28.936	32.8	27.3	80	42.4	22.7	19.7	0 10	02	10		
16.	28.975	10.0	4.9	83	26.0	5.5	20.5	0 0	00	10		.44
17.	29.564	16.0	1.8	52	22.0	5.2	16.8	8 30	98	0		
18.	.272	36.2	34.6	94	46.0	15.7	30.3	0 0	00	10	1.15	
19.	.323	36.4	30.5	80	43.5	32.2	11.3	5 40	65	3	.10	
20.	.443	26.9	18.8	76	33.2	22.2	11.0	2 0	23	8		
21.	.446	29.2	18.7	64	37.6	18.7	18.9	8 30	98	0		
22.	.559	30.4	23.0	64	37.2	27.3	9.9	1 30	15	8	Inap.	
23.	.708	33.7	26.4	76	39.5	26.2	13.3	7 0	80	2		
24.	.203	46.1	46.1	98	50.8	34.4	16.4	0 0	00	10	.09	
25.	.264	25.1	30.4	61	51.0	12.8	38.2	7 45	89	1	1.15	
26.	.451	17.0	11.9	80	20.5	10.2	10.3	0 0	00	10		Inap.
27.	.331	22.9	15.5	72	32.0	16.0	16.0	1 50	21	8		.03
28.	.496	15.9	3.8	58	22.9	11.2	11.7	8 40	100	0		
29.	.561	14.0	0.3	54	19.1	9.1	10.0	0 50	10	9		
30.	.690	7.1	4.0	87	9.1	2.7	6.4	0 0	00	10		.35
31.	.355	19.0	17.8	95	32.6	7.7	24.9	0 0	00	10	.28	.20
Sums.								110 55			3.03	2.51
Means.	29.351	25.1	17.5	73.3	33.0	17.9	15.1	3 33	41	5.9		
Red. to Sea Level and Stan. Gravity.	30.082	Mean (Max. and Min.) .			25.5		Total Precipitation				5.54	

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles). — 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29.

WACHUSETT (distant 44 miles). — 1, 2, 4, 5, 7, 8, 9, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 24, 25, 26, 27, 28.

MONADNOCK (distant 68 miles). — 1, 2, 4, 5, 7, 8, 9, 13, 14, 15, 16, 18, 21, 22.

DAYS ON WHICH WESTERN MOUNTAINS WERE VISIBLE.

NOBSCOT (distant 20 miles). — 1, 2, 3, 4, 6, 8, 9, 14, 15, 16, 17, 19, 20, 25, 26, 27, 28, 29.

WACHUSETT (distant 44 miles). — 3, 4, 6, 8, 14, 16, 25, 26, 27, 29.

MONADNOCK (distant 68 miles). — 3, 4, 6, 8, 14, 25, 27, 29.

ANNUAL SUMMARY.

MONTHLY MEANS AND TOTALS.

Month.	Barom. Red. to 32.° Inches.	Barom. Red. to Sea Level and Stan. Grav. Inches.	Air Temp. °	Dew Point. °	Relative Hum. Per cent	Max. Temp. °	Min. Temp. °	Range of Temp. °	Bright Sunshine. Duration. Hours.	Min.	Per cent. of Possible.	Cloudiness. 0-10	Precipitation. Rainfall. Inches.	Melted Snow. Inches.	Total. Inches.	No. of Days with .01 in. or more Precipitation.
January	29.286	30.018	23.1	18.9	76.3	30.5	15.5	15.0	118	15	42	5.8	3.83	1.34	5.17	14
February	.257	29.990	23.2	17.6	72.8	32.7	15.0	17.7	127	15	45	5.5	7.67	.62	8.29	9
March	.162	29.879	30.6	23.0	71.5	38.3	23.1	15.2	144	05	41	5.9	2.53	.52	3.05	15
April	.426	30.126	45.8	35.5	70.0	56.0	37.7	18.3	177	19	46	5.4	2.02	.14	2.16	9
May	.219	29.896	54.0	43.3	69.4	64.0	45.7	18.3	219	45	52	4.8	3.94	.00	3.94	12
June	.293	29.966	61.1	51.4	73.2	70.1	53.3	16.8	202	30	46	5.4	1.52	.00	1.52	11
July	.269	29.930	68.7	58.9	73.1	79.0	60.5	18.5	236	55	54	4.6	2.26	.00	2.26	7
August	.290	29.956	65.4	56.7	75.0	75.6	57.1	18.5	253	31	61	3.9	3.95	.00	3.95	12
September	.440	30.118	60.2	52.7	78.0	69.1	53.7	15.4	191	00	53	4.7	3.08	.00	3.08	10
October	.459	30.152	49.5	40.6	74.4	57.7	42.2	15.5	176	38	54	4.6	4.87	.00	4.87	9
November	.253	29.957	40.1	31.3	72.3	48.6	32.7	15.9	140	05	49	5.1	2.98	.18	3.16	10
December	.351	30.082	25.1	17.5	73.3	33.0	17.9	15.1	110	55	41	5.9	3.03	2.51	5.54	14
Yearly sums	.....	.....	.....	.....	....	.....	.....	.....	2,098	13	.....	.....	41.68	5.31	46.99	132
Yearly means	29.308	30.005	45.6	37.3	73.3	54.6	37.9	16.7	174	51	49	5.1	.....	.....	3.92	11

MONTHLY EXTREMES.

Month.	Pressure. Red. to 32°, Sea Level, and Stan. Gravity. Highest. Inches.	Lowest. Inches.	Range. Inches.	Air Temperature. Highest. °	Lowest. °	Range. °	Mean Daily. Highest. °	Lowest. °	Daily Range. Greatest. °	Least. °	Wind. Highest Hourly Velocity and Direction. Miles.		Max. Pressure per Square Ft. Pounds.	Greatest Daily Precipitation. Inches.
January	30.869	28.687	2.182	50.7	-15.0	65.7	45.2	-6.5	30.0	3.7	65	N. E.	32.5	1.36
February	.715	28.941	1.774	55.4	-9.8	65.2	47.3	-5.2	38.0	1.7	73	N. W.	43.7	4.85
March	.585	29.267	1.318	59.0	-3.0	62.0	55.7	1.3	25.1	7.0	56	N. W.	20.5	1.18
April	.620	29.545	1.075	78.9	24.4	54.5	63.5	28.0	35.4	7.2	58	N. E.	26.0	1.72
May	.330	29.486	0.844	81.7	34.5	47.2	68.6	40.7	31.9	4.7	40	N. W.	10.0	1.48
June	.268	29.428	0.830	81.2	47.5	33.7	67.8	52.1	29.5	3.5	33	N. W.	7.0	0.61
July	.227	29.668	0.559	91.0	50.0	41.0	80.2	59.6	28.8	8.0	37	S.	11.0	1.11
August	.375	29.466	0.909	88.1	50.5	37.6	75.8	55.3	33.5	10.1	39	W.	12.0	0.98
September	.483	29.635	0.848	81.6	37.7	43.9	70.8	47.2	24.9	4.3	38	N. W.	13.0	1.51
October	.618	29.678	0.940	76.6	24.6	52.0	65.4	34.2	25.0	2.9	43	N. E.	14.0	1.79
November	.454	29.180	1.274	63.0	22.1	40.9	53.7	28.3	28.0	8.2	69	S.	31.0	1.06
December	.656	29.320	1.336	51.0	2.7	48.3	46.1	7.1	38.2	4.8	48	N.	17.0	1.15
Year	30.869	28.687	2.182	91.0	-15.0	106.0	80.2	-6.5	38.2	1.7	73	N. W.	43.7	4.85

NUMBER OF HOURS OF PREVALENCE OF EACH WIND

REFERRED TO

DIFFERENT POINTS OF AZIMUTH,

FOR

EACH DAY, MONTH, AND THE YEAR 1886,

AS DERIVED FROM THE RECORDS OF THE DRAPER ANEMOSCOPE.

JANUARY.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	0	1	1	2	20	0	0	0	
2.	0	0	0	0	5	8	8	3	
3.	15	0	0	0	0	0	0	9	
4.	24	0	0	0	0	0	0	0	
5.	11	13	0	0	0	0	0	0	
6.	0	0	3	21	0	0	0	0	
7.	0	0	0	23	1	0	0	0	
8.	0	0	0	10	8	2	4	0	
9.	2	1	5	3	0	3	7	3	
10.	0	0	3	21	0	0	0	0	
11.	0	0	0	23	1	0	0	0	
12.	0	0	0	10	14	0	0	0	
13.	0	0	0	11	5	5	2	1	
14.	0	0	0	0	1	23	0	0	
15.	0	0	0	0	15	1	5	3	
16.	0	0	0	0	0	11	13	0	
17.	0	0	0	11	8	5	0	0	
18.	0	0	0	14	10	0	0	0	
19.	4	0	0	2	2	0	4	12	
20.	0	0	0	13	6	1	2	2	
21.	15	0	0	0	0	1	3	5	
22.	0	0	0	0	2	18	4	0	
23.	0	0	4	6	14	0	0	0	
24.	0	0	0	0	2	22	0	0	
25.	0	0	0	0	0	14	9	1	
26.	0	0	0	0	10	14	0	0	
27.	0	0	0	0	0	0	21	3	
28.	0	0	0	0	0	3	21	0	
29.	0	0	0	0	0	15	9	0	
30.	Vane	clogged	by ice.						
31.	0	8	2	12	2	0	0	0	
Sums.	71	23	18	182	126	146	112	42	0

FEBRUARY.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	0	0	3	15	6	0	0	0	
2.	0	0	6	6	12	0	0	0	
3.	0	0	0	7	10	7	0	0	
4.	0	0	0	0	5	19	0	0	
5.	0	0	0	0	24	0	0	0	
6.	0	4	5	9	6	0	0	0	
7.	0	2	16	5	0	0	0	0	1
8.	0	3	21	0	0	0	0	0	
9.	5	3	9	7	0	0	0	0	
10.	0	0	0	0	0	3	21	0	
11.	0	0	0	0	0	0	24	0	
12.	9	6	0	0	0	0	5	4	
13.	1	18	5	0	0	0	0	0	
14.	0	7	16	1	0	0	0	0	
15.	3	9	10	2	0	0	0	0	
16.	0	0	1	21	2	0	0	0	
17.	0	5	7	6	6	0	0	0	
18.	2	1	13	8	0	0	0	0	
19.	5	18	0	0	0	0	0	1	
20.	0	0	4	13	7	0	0	0	
21.	0	0	7	7	10	0	0	0	
22.	4	4	1	1	2	7	3	2	
23.	0	3	9	4	8	0	0	0	
24.	0	0	0	0	18	4	2	0	
25.	20	2	0	0	0	0	0	2	
26.	0	4	0	8	12	0	0	0	
27.	0	0	0	0	24	0	0	0	
28.	0	0	0	0	24	0	0	0	
Sums.	49	89	133	120	176	40	55	9	1

MARCH.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E	E.	Calm.
1.	0	0	0	3	21	0	0	0	
2.	0	0	0	0	24	0	0	0	
3.	0	0	0	0	24	0	0	0	
4.	0	0	0	0	24	0	0	0	
5.	0	0	0	0	24	0	0	0	
6.	0	0	0	0	24	0	0	0	
7.	0	0	0	0	23	0	1	0	
8.	3	7	6	0	0	0	5	3	
9.	0	5	1	1	1	13	3	0	
10.	0	0	0	1	11	12	0	0	
11.	0	0	4	12	8	0	0	0	
12.	0	5	19	0	0	0	0	0	
13.	0	4	6	5	9	0	0	0	
14.	0	0	0	11	13	0	0	0	
15.	12	0	0	3	1	0	3	5	
16.	7	1	0	3	9	4	0	0	
17.	0	3	1	0	5	6	3	7	
18.	0	0	3	5	10	6	0	0	
19.	6	0	0	0	0	1	14	3	
20.	11	0	0	0	0	0	4	9	
21.	0	0	0	0	0	12	4	8	
22.	0	0	6	13	2	2	1	0	
23.	0	0	0	18	6	0	0	0	
24.	0	0	0	0	24	0	0	0	
25.	2	11	3	3	4	0	0	1	
26.	0	0	0	21	3	0	0	0	
27.	4	15	4	1	0	0	0	0	
28.	2	0	0	0	0	0	16	6	
29.	10	1	0	0	0	0	0	13	
30.	8	2	0	0	0	6	4	4	
31.	0	24	0	0	0	0	0	0	
Sums.	65	78	53	100	270	62	58	58	0

APRIL.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	0	17	7	0	0	0	0	0	
2.	0	5	7	4	8	0	0	0	
3.	1	0	0	4	8	9	0	2	
4.	2	0	0	0	1	8	8	5	
5.	9	0	0	0	0	3	5	6	1
6.	0	0	0	0	0	2	19	3	
7.	2	5	0	0	1	1	14	1	
8.	0	0	0	0	11	13	0	0	
9.	0	0	0	6	18	0	0	0	
10.	0	0	0	18	1	5	0	0	
11.	6	0	0	0	0	8	7	3	
12.	4	20	0	0	0	0	0	0	
13.	0	3	20	1	0	0	0	0	
14.	5	0	1	1	2	1	11	3	
15.	3	3	6	7	0	0	0	5	
16.	4	0	0	0	0	0	15	5	
17.	5	12	2	2	0	1	0	2	
18.	1	3	6	8	2	0	2	2	
19.	0	0	0	3	5	4	6	6	
20.	2	2	0	0	0	0	14	6	
21.	0	5	14	5	0	0	0	0	
22.	2	3	0	2	2	3	8	4	
23.	0	9	15	0	0	0	0	0	
24.	5	1	4	6	2	4	1	1	
25.	3	6	3	0	0	0	5	7	
26.	0	0	2	3	8	8	1	2	
27.	2	1	3	1	0	0	8	9	
28.	0	0	3	7	3	1	9	4	
29.	0	0	0	0	0	0	7	17	
30.	0	0	0	0	0	1	16	7	
Sums.	56	95	93	78	72	72	153	100	1

MAY.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	5	0	0	0	0	4	7	8	
2.	0	0	0	0	0	2	21	1	
3.	2	11	0	0	0	7	2	2	
4.	0	7	16	1	0	0	0	0	
5.	0	11	10	2	1	0	0	0	
6.	2	3	3	9	6	1	0	0	
7.	0	12	5	5	2	0	0	0	
8.	3	0	0	0	0	9	10	2	
9.	0	0	0	0	8	16	0	0	
10.	5	9	3	0	2	3	2	0	
11.	8	0	0	0	0	3	6	7	
12.	2	0	0	0	0	1	12	9	
13.	1	0	0	0	0	2	11	10	
14.	3	0	0	0	0	0	12	9	
15.	13	11	0	0	0	0	0	0	
16.	0	9	1	1	9	4	0	0	
17.	0	0	0	1	18	5	0	0	
18.	0	12	11	0	0	1	0	0	
19.	0	1	23	0	0	0	0	0	
20.	0	2	19	2	1	0	0	0	
21.	0	0	1	1	22	0	0	0	
22.	0	4	18	2	0	0	0	0	
23.	0	0	4	4	12	4	0	0	
24.	2	5	3	1	2	6	2	3	
25.	0	4	6	4	10	0	0	0	
26.	0	0	3	21	0	0	0	0	
27.	0	9	13	2	0	0	0	0	
28.	0	0	2	5	6	11	0	0	
29.	0	3	4	5	7	5	0	0	
30.	0	3	20	1	0	0	0	0	
31.	8	0	4	3	0	3	3	3	
Sums.	54	116	169	70	106	87	88	54	0

JUNE.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	3	4	0	0	2	1	9	5	
2.	0	15	9	0	0	0	0	0	
3.	0	8	5	8	3	0	0	0	
4.	3	9	1	0	10	0	1	0	
5.	0	11	13	0	0	0	0	0	
6.	0	9	14	1	0	0	0	0	
7.	0	10	14	0	0	0	0	0	
8.	0	0	5	6	13	0	0	0	
9.	0	3	7	5	9	0	0	0	
10.	1	5	4	5	7	2	0	0	
11.	3	2	0	0	0	5	10	4	
12.	3	0	2	0	2	6	8	3	
13.	11	0	0	1	2	0	1	9	
14.	13	0	0	0	0	0	0	11	
15.	17	0	0	0	0	0	0	7	
16.	5	9	7	1	0	2	0	0	
17.	0	7	17	0	0	0	0	0	
18.	0	0	0	9	11	4	0	0	
19.	3	3	0	0	9	2	5	2	
20.	4	4	3	3	3	4	1	2	
21.	0	3	13	6	2	0	0	0	
22.	0	0	9	14	1	0	0	0	
23.	7	0	2	2	2	0	4	7	
24.	0	0	0	0	0	0	1	23	
25.	1	0	3	2	2	3	9	4	
26.	0	1	8	15	0	0	0	0	
27.	0	0	0	9	10	2	2	1	
28.	0	0	5	0	1	9	8	1	
29.	0	0	6	16	1	1	0	0	
30.	0	0	0	0	15	4	5	0	
Sums.	74	103	147	103	105	45	64	79	0

JULY.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	0	3	5	6	4	6	0	0	
2.	0	3	19	2	0	0	0	0	
3.	4	2	3	2	3	3	5	2	
4.	1	9	6	0	0	3	5	0	
5.	2	1	10	5	0	0	2	4	
6.	0	0	7	17	0	0	0	0	
7.	0	0	6	17	1	0	0	0	
8.	5	0	0	0	6	6	2	5	
9.	2	0	0	0	0	4	8	10	
10.	3	2	0	0	0	3	6	10	
11.	0	3	8	9	2	2	0	0	
12.	0	5	0	1	12	6	0	0	
13.	0	8	6	10	0	0	0	0	
14.	12	2	0	0	0	0	0	10	
15.	3	14	0	0	0	0	1	6	
16.	0	22	2	0	0	0	0	0	
17.	0	15	9	0	0	0	0	0	
18.	1	11	11	1	0	0	0	0	
19.	0	2	4	16	2	0	0	0	
20.	0	0	0	3	17	4	0	0	
21.	2	9	2	0	5	4	1	1	
22.	0	0	4	16	0	3	1	0	
23.	1	0	1	1	2	8	10	1	
24.	0	0	0	19	3	2	0	0	
25.	0	5	13	6	0	0	0	0	
26.	0	11	13	0	0	0	0	0	
27.	0	9	13	2	0	0	0	0	
28.	5	3	2	3	4	3	2	2	
29.	0	1	20	3	0	0	0	0	
30.	0	2	19	3	0	0	0	0	
31.	0	6	8	2	4	4	0	0	
Sums.	40	148	191	144	66	61	43	51	0

AUGUST.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	2	12	4	3	3	0	0	0	
2.	0	5	1	7	11	0	0	0	
3.	0	0	0	22	2	0	0	0	
4.	0	0	0	14	10	0	0	0	
5.	0	1	3	9	11	0	0	0	
6.	0	10	10	3	1	0	0	0	
7.	1	1	0	3	1	2	13	3	
8.	0	1	5	2	2	11	3	0	
9.	0	0	19	5	0	0	0	0	
10.	0	0	24	0	0	0	0	0	
11.	0	1	23	0	0	0	0	0	
12.	0	0	3	11	8	2	0	0	
13.	3	11	0	0	0	5	3	2	
14.	0	8	6	4	4	2	0	0	
15.	0	0	0	1	19	4	0	0	
16.	2	16	0	3	1	2	0	0	
17.	4	2	3	3	1	3	4	4	
18.	4	8	0	0	0	2	6	4	
19.	1	5	11	1	1	2	0	3	
20.	13	7	1	2	1	0	0	0	
21.	12	4	3	5	0	0	0	0	
22.	3	0	0	0	1	4	15	1	
23.	0	7	5	3	9	0	0	0	
24.	1	7	11	5	0	0	0	0	
25.	0	1	0	0	0	7	16	0	
26.	0	0	0	12	5	5	2	0	
27.	0	0	6	9	8	1	0	0	
28.	1	4	6	7	4	1	0	1	
29.	1	0	0	4	1	1	12	5	
30.	3	5	0	0	1	3	3	9	
31.	0	15	0	2	1	6	0	0	
Sums.	51	131	144	140	106	63	77	32	0

SEPTEMBER.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	0	0	0	0	15	7	2	0	
2.	2	2	2	2	2	4	8	2	
3.	0	0	0	3	2	3	13	3	
4.	0	0	0	0	0	0	13	11	
5.	6	0	0	0	0	0	11	7	
6.	19	4	0	0	0	0	0	1	
7.	0	5	16	3	0	0	0	0	
8.	0	0	22	2	0	0	0	0	
9.	0	9	15	0	0	0	0	0	
10.	4	0	0	2	0	6	9	3	
11.	0	0	7	5	12	0	0	0	
12.	3	14	2	0	5	0	0	0	
13.	0	0	0	13	11	0	0	0	
14.	0	19	5	0	0	0	0	0	
15.	0	2	3	2	2	0	7	8	
16.	6	0	0	0	0	0	3	15	
17.	0	10	13	1	0	0	0	0	
18.	0	0	2	2	13	4	2	1	
19.	7	10	4	0	0	0	1	2	
20.	0	0	2	11	11	0	0	0	
21.	0	0	0	22	1	1	0	0	
22.	0	3	3	4	8	6	0	0	
23.	5	4	3	0	0	3	5	4	
24.	0	0	0	11	8	5	0	0	
25.	5	2	0	0	2	1	9	5	
26.	0	7	17	0	0	0	0	0	
27.	0	0	2	11	4	0	1	6	
28.	10	5	1	0	2	0	0	6	
29.	0	3	3	1	15	2	0	0	
30.	0	0	0	0	2	7	6	9	
Sums.	67	99	122	95	115	49	90	83	0

OCTOBER.

Date.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	0	0	3	15	6	0	0	0	
2.	0	0	0	23	1	0	0	0	
3.	0	1	8	9	0	4	2	0	
4.	0	0	23	1	0	0	0	0	
5.	4	0	0	2	2	1	11	4	
6.	0	1	0	0	1	9	6	7	
7.	0	0	0	0	0	3	21	0	
8.	2	6	7	0	0	3	6	0	
9.	0	0	0	12	12	0	0	0	
10.	4	2	1	0	1	5	9	2	
11.	0	4	20	0	0	0	0	0	
12.	0	0	6	15	3	0	0	0	
13.	0	0	0	0	3	0	14	7	
14.	10	8	0	0	0	0	0	6	
15.	0	8	2	14	0	0	0	0	
16.	0	0	0	0	24	0	0	0	
17.	0	5	9	1	9	0	0	0	
18.	0	3	5	0	2	3	2	9	
19.	4	2	0	0	0	0	7	11	
20.	0	5	19	0	0	0	0	0	
21.	0	0	12	3	9	0	0	0	
22.	0	0	13	7	4	0	0	0	
23.	0	0	0	4	5	11	4	0	
24.	3	1	0	0	0	2	8	10	
25.	1	11	12	0	0	0	0	0	
26.	0	0	1	7	1	2	11	2	
27.	0	0	0	0	0	0	13	11	
28.	0	0	0	0	0	10	14	0	
29.	0	0	0	0	0	0	24	0	
30.	0	0	0	0	0	9	15	0	
31.	0	0	0	0	0	7	10	7	
Sums.	28	57	141	113	83	69	177	76	0

NOVEMBER.

Date.	S. E.	S	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
1.	2	0	0	1	7	14	0	0	
2.	4	3	0	0	0	11	4	2	
3.	0	24	0	0	0	0	0	0	
4.	0	8	1	3	12	0	0	0	
5.	2	13	3	3	3	0	0	0	
6.	6	13	5	0	0	0	0	0	
7.	2	5	2	15	0	0	0	0	
8.	0	0	0	24	0	0	0	0	
9.	0	0	9	15	0	0	0	0	
10.	1	1	15	4	1	0	0	2	
11.	0	0	2	19	3	0	0	0	
12.	0	0	0	2	9	3	2	8	
13.	0	0	0	4	3	6	6	5	
14.	0	0	0	23	1	0	0	0	
15.	0	0	0	20	4	0	0	0	
16.	0	0	0	4	19	1	0	0	
17.	5	16	3	0	0	0	0	0	
18.	0	14	3	7	0	0	0	0	
19.	0	0	5	19	0	0	0	0	
20.	0	0	5	18	1	0	0	0	
21.	0	0	0	21	3	0	0	0	
22.	0	0	0	3	15	1	3	2	
23.	13	3	7	0	0	0	0	1	
24.	0	0	6	9	9	0	0	0	
25.	3	0	1	6	7	0	1	6	
26.	0	0	1	23	0	0	0	0	
27.	0	0	3	19	2	0	0	0	
28.	0	2	16	6	0	0	0	0	
29.	4	17	3	0	0	0	0	0	
30.	1	1	5	2	0	2	7	6	
Sums.	43	120	95	270	99	38	23	32	0

DECEMBER.

Date.	S. E	S.	S. W.	W.	N. W.	N.	N E.	E.	Calm.
1.	2	1	6	15	0	0	0	0	
2.	0	3	5	16	0	0	0	0	
3.	0	0	0	20	4	0	0	0	
4.	0	0	0	2	22	0	0	0	
5.	0	0	0	0	0	24	0	0	
6.	0	0	0	0	0	16	8	0	
7.	0	0	0	0	0	17	7	0	
8.	0	0	0	16	7	1	0	0	
9.	0	0	0	12	9	1	2	0	
10.	1	3	15	0	0	0	4	1	
11.	0	0	6	12	5	1	0	0	
12.	0	0	0	0	1	3	7	13	
13.	0	0	1	0	1	7	14	1	
14.	0	0	4	20	0	0	0	0	
15.	0	6	10	1	3	3	1	0	
16.	0	0	0	2	10	12	0	0	
17.	0	0	14	10	0	0	0	0	
18.	3	4	16	1	0	0	0	0	
19.	0	0	12	9	3	0	0	0	
20.	0	0	0	0	22	2	0	0	
21.	0	0	14	4	6	0	0	0	
22.	0	3	8	10	3	0	0	0	
23.	8	2	0	0	1	8	4	1	
24.	8	16	0	0	0	0	0	0	
25.	0	2	1	1	20	0	0	0	
26.	0	0	0	0	0	18	6	0	
27.	0	3	4	8	5	4	0	0	
28.	0	0	0	20	4	0	0	0	
29.	0	0	0	9	8	7	0	0	
30.	0	0	0	0	0	24	0	0	
31.	0	0	0	0	0	12	12	0	
Sums.	22	43	116	188	134	160	65	16	0

ANNUAL SUMMARY.

Month.	S. E.	S.	S. W.	W.	N. W.	N.	N. E.	E.	Calm.
January (30 days)	71	23	18	**182**	126	146	112	42	0
February	49	89	133	120	**176**	40	55	9	1
March	65	78	53	100	**270**	62	58	58	0
April	56	95	93	78	72	72	**153**	100	1
May	54	116	**169**	70	106	87	88	54	0
June	74	103	**147**	103	105	45	64	79	0
July	40	148	**191**	144	66	61	43	51	0
August	51	131	**144**	140	106	63	77	32	0
September	67	99	**122**	95	115	49	90	83	0
October	28	57	141	113	83	69	**177**	76	0
November	43	120	95	**270**	99	38	23	32	0
December	22	43	116	**188**	134	160	65	16	0
Year	620	1,102	1,422	**1,603**	1,458	892	1,005	632	2

HOURLY MEASURES IN MILES

OF THE

HORIZONTAL MOVEMENT OF THE WIND

FOR

EACH DAY, MONTH, AND THE YEAR 1886,

AS DERIVED FROM THE RECORDS OF THE DRAPER ANEMOMETER.

JANUARY.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	10	10	16	33	42	46	44	37	38	38	38	39	35	37	35	31	25	24	23	26	27	28	24	20	727	1.
2.	16	16	19	17	21	23	25	20	20	17	13	13	11	14	16	15	13	14	14	14	19	12	13	15	391	2.
3.	16	15	15	13	17	17	12	12	11	12	17	19	14	8	10	10	9	11	11	13	13	13	14	15	317	3.
4.	13	14	14	19	15	18	19	19	18	20	26	24	20	18	18	24	33	36	35	37	35	39	41	42	597	4.
5.	39	46	50	43	45	49	43	47	51	35	35	44	46	30	28	19	15	17	21	24	21	23	20	22	813	5.
6.	21	18	18	17	16	18	17	15	16	17	17	21	20	23	20	27	27	22	22	26	22	21	23	24	488	6.
7.	23	28	25	25	29	27	26	29	23	22	28	34	32	32	33	27	28	24	23	23	25	24	19	19	628	7.
8.	27	28	29	16	18	18	18	18	15	14	15	16	19	17	16	14	12	9	13	14	16	21	19	20	422	8.
9.	30	42	46	55	60	65	62	53	58	57	41	31	12	7	14	36	43	42	39	31	34	31	27	25	943	9.
10.	26	26	28	30	31	27	35	36	34	36	41	47	43	43	41	37	31	32	25	31	23	25	25	22	775	10.
Sums.	221	243	260	268	294	**308**	301	286	284	268	271	288	262	239	231	240	236	231	226	239	235	237	225	224	6,101	Sums.
11.	16	19	23	18	17	20	18	18	15	11	14	19	21	21	20	22	21	19	19	19	19	21	20	22	452	11.
12.	19	24	30	26	23	21	20	18	21	18	18	26	22	25	25	26	19	12	11	16	20	21	22	20	503	12.
13.	19	17	14	14	14	12	14	14	14	12	8	8	6	4	3	3	4	2	5	5	5	3	5	11	217	13.
14.	16	25	22	21	24	27	27	23	22	21	20	16	13	15	14	17	19	18	17	16	16	9	10	15	443	14.
15.	17	20	16	14	9	3	1	2	3	8	2	2	4	5	3	4	3	10	12	8	6	11	13	12	188	15.
16.	12	13	16	21	23	23	22	21	23	25	22	18	14	15	16	12	17	20	25	20	19	19	19	14	449	16.
17.	15	14	12	10	10	14	14	12	10	5	10	17	20	26	30	34	31	35	32	29	29	30	32	29	500	17.
18.	23	32	24	22	29	24	23	22	20	22	29	27	26	24	22	22	19	12	13	14	13	14	10	10	496	18.
19.	6	8	11	7	7	5	7	9	9	18	19	21	21	16	18	17	14	12	15	20	35	27	22	22	366	19.
20.	27	27	26	32	26	27	29	24	22	23	27	21	21	23	22	16	9	7	9	9	8	7	4	5	452	20.
Sums.	170	**199**	194	185	182	177	175	163	159	163	169	175	168	174	173	173	156	147	158	156	170	162	157	160	4,066	Sums.
21.	7	11	12	19	20	21	20	25	23	24	23	19	22	25	20	15	17	7	8	12	12	15	19	27	423	21.
22.	31	27	19	21	19	19	20	21	21	25	24	22	21	22	25	26	23	22	19	20	18	12	10	4	491	22.
23.	10	11	21	28	24	21	25	32	34	32	38	31	31	42	38	32	25	26	26	22	22	24	25	28	648	23.
24.	26	30	27	21	22	23	21	19	20	22	20	20	20	23	26	26	26	28	29	30	28	29	28	26	591	24.
25.	26	25	25	24	25	21	15	14	11	12	11	10	9	9	9	10	12	12	12	15	21	22	20	20	388	25.
26.	13	16	15	18	15	15	15	13	9	7	4	5	7	8	6	7	13	12	22	21	18	16	19	20	313	26.
27.	21	22	22	17	18	15	19	19	22	24	21	26	21	25	24	29	25	24	24	22	26	24	25	24	539	27.
28.	Anem	ometer	clogged	with ice.																						28.
29.																										29.
30.																										30.
31.																										31.
Sums.	134	142	141	148	143	135	135	143	140	146	141	133	131	**154**	148	145	141	131	140	142	145	142	146	149	3,393	Sums.
Monthly Sums.	525	584	595	601	619	**620**	611	592	583	577	581	596	561	557	552	558	533	509	524	537	550	541	528	533	13,560	Monthly Sums.
Means.	19.4	21.6	22.0	22.3	22.9	**23.0**	22.6	21.9	21.6	21.4	21.5	22.1	20.8	20.6	20.4	20.7	19.7	18.9	19.4	19.9	20.4	20.0	19.6	19.7	20.9	Means.

FEBRUARY.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	14	14	11	10	8	7	6	7	7	10	12	16	18	15	13	16	16	16	19	20	23	22	19	22	341	1.
2.	23	21	26	30	35	30	30	31	30	26	32	31	26	21	20	15	18	16	21	19	20	21	24	25	590	2.
3.	20	25	24	19	20	23	22	21	25	20	18	16	15	12	12	14	14	15	18	20	26	23	22	25	469	3.
4.	25	36	36	38	39	38	37	40	36	40	38	37	36	37	36	32	31	29	28	30	26	30	38	31	824	4.
5.	35	35	33	33	32	29	34	28	32	30	34	30	33	31	33	36	35	28	29	33	27	30	30	30	764	5.
6.	22	22	20	23	20	25	16	22	24	19	10	12	10	6	6	10	8	11	12	16	14	14	14	13	369	6.
7.	17	11	13	13	9	13	13	14	12	9	6	5	5	5	4	6	6	3	0	4	9	11	12	11	211	7.
8.	15	18	16	18	17	18	22	21	23	27	30	28	30	25	23	26	25	23	22	24	25	22	20	26	544	8.
9.	26	26	31	28	29	25	22	16	16	12	13	8	6	5	6	2	2	5	5	5	6	4	2	3	305	9.
10.	17	20	18	18	21	20	20	22	21	20	21	23	23	31	28	32	24	25	24	25	24	24	25	26	552	10.
Sums.	214	228	228	**230**	**230**	228	222	222	226	213	214	206	202	188	181	189	179	171	178	196	200	201	206	212	4,969	Sums.
11.	22	23	23	26	28	29	31	29	33	30	32	30	33	36	37	38	36	34	36	37	33	42	41	40	782	11.
12.	32	37	36	32	33	34	23	18	16	11	9	8	23	28	16	10	8	14	17	19	20	33	27	21	525	12.
13.	20	27	40	39	40	40	40	39	36	34	32	35	33	23	16	19	32	31	27	22	21	22	27	30	725	13.
14.	35	33	29	26	29	26	26	27	25	22	24	29	26	23	19	22	23	23	22	24	26	27	29	25	620	14.
15.	23	24	25	26	20	17	18	11	7	7	9	12	18	17	26	33	30	32	38	47	57	54	40	37	628	15.
16.	35	39	38	30	29	32	29	29	22	23	28	32	29	31	26	27	30	36	32	39	33	25	25	25	724	16.
17.	24	27	23	19	22	18	16	10	8	5	13	3	8	13	17	17	22	21	22	17	19	20	24	24	412	17.
18.	23	26	24	23	22	18	18	21	21	20	22	21	25	31	31	28	23	14	15	10	15	10	8	1	470	18.
19.	4	13	15	14	15	20	21	23	22	20	21	23	34	37	33	33	31	22	22	24	17	13	18	9	494	19.
20.	16	18	16	19	21	24	21	24	22	21	24	24	25	32	34	37	39	42	58	60	56	61	58	49	801	20.
Sums.	234	267	249	244	259	258	243	231	212	193	214	217	254	271	255	264	274	269	289	299	297	**307**	297	261	6,181	Sums.
21.	44	44	41	44	39	35	29	28	25	28	32	24	25	19	14	17	12	16	16	17	15	17	15	11	607	21.
22.	7	5	9	13	15	15	17	14	15	14	9	11	8	6	5	4	4	10	13	17	17	18	19	20	285	22.
23.	23	24	28	27	26	26	22	24	21	17	17	13	16	20	24	28	29	31	32	33	35	22	27	30	595	23.
24.	25	37	27	28	27	16	25	25	28	30	32	31	28	27	28	30	26	22	20	12	10	11	10	12	567	24.
25.	13	9	9	10	17	20	23	25	26	27	29	33	37	36	39	42	45	56	57	47	51	50	53	33	787	25.
26.	28	15	11	7	17	35	35	37	40	47	52	50	49	47	43	41	48	53	54	68	70	63	66	59	1,035	26.
27.	62	66	63	64	63	73	63	64	59	57	55	60	64	66	64	69	61	60	61	59	49	51	55	60	1,467	27.
28.	41	45	41	36	37	47	45	61	60	57	48	49	50	58	59	62	58	54	59	59	57	49	46	55	1,233	28.
Sums.	243	245	229	229	241	267	259	278	274	277	274	271	277	278	276	293	283	302	**312**	**312**	304	281	291	280	6,576	Sums.
Monthly Sums.	691	740	706	703	730	753	724	731	712	683	702	694	733	737	712	746	736	742	779	**807**	801	789	794	753	17,726	Monthly Sums.
Means.	24.7	26.4	25.3	25.1	26.1	26.9	25.9	26.1	25.4	24.4	25.1	24.8	26.2	26.3	25.4	26.6	26.3	26.5	27.8	**28.8**	28.6	28.2	28.4	26.9	26.4	Means.

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Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9 10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	49	50	51	45	44	35	41	40	38	41	41	41	44	55	45	42	42	38	36	40	46	49	54	48	1,055	1.
2.	37	44	56	51	51	47	43	49	46	41	50	45	44	52	47	51	52	46	46	49	45	43	43	45	1,123	2.
3.	45	43	40	37	37	38	35	38	37	35	34	27	31	27	28	26	27	30	25	33	33	32	29	24	791	3.
4.	22	28	27	29	29	31	30	34	34	32	34	26	29	28	31	28	32	34	37	38	34	27	30	31	735	4.
5.	31	27	21	23	23	25	23	23	30	28	35	30	32	27	23	26	23	26	25	28	30	32	27	21	639	5.
6.	16	18	17	17	20	20	18	14	17	26	27	23	28	33	30	33	40	34	29	33	40	40	38	34	645	6.
7.	26	25	21	18	18	20	22	19	21	33	27	29	32	35	27	28	24	19	24	18	15	11	5	6	523	7.
8.	8	7	9	8	6	10	12	11	10	10	11	9	9	9	10	12	15	19	20	14	13	16	18	18	284	8.
9.	20	19	18	12	9	6	7	16	21	32	32	32	33	31	29	25	19	21	18	20	18	19	14	10	481	9.
10.	13	24	16	15	15	12	14	15	12	13	12	9	7	8	10	14	16	15	17	16	18	16	13	17	327	10.
Sums.	267	275	276	255	252	244	245	259	266	291	303	271	289	**305**	280	285	290	282	277	289	292	285	271	254	6,603	Sums.
11.	16	14	14	17	23	23	20	19	20	15	13	9	13	16	18	21	25	20	20	23	24	28	20	18	449	11.
12.	21	22	28	29	27	26	29	23	25	24	28	30	34	38	35	30	36	24	25	26	28	26	26	25	665	12.
13.	24	21	20	20	15	12	9	8	9	8	7	4	3	6	13	13	10	12	15	14	17	14	13	15	302	13.
14.	21	26	32	36	31	36	39	36	38	33	34	23	20	21	26	26	30	23	13	13	9	11	16	20	613	14.
15.	13	13	14	12	10	11	13	12	11	10	11	12	13	14	13	12	15	17	17	18	16	13	15	14	319	15.
16.	13	13	10	11	11	6	4	2	3	12	4	5	15	17	22	35	24	35	25	37	39	34	32	28	436	16.
17.	23	28	29	20	17	21	21	21	24	21	21	14	16	14	14	11	12	11	13	12	8	8	7	9	395	17.
18.	15	15	17	16	16	13	11	17	13	14	15	11	11	16	17	16	18	19	19	18	17	23	22	21	390	18.
19.	21	18	17	17	16	18	19	18	14	13	16	13	11	12	11	11	14	11	14	14	14	13	14	14	353	19.
20.	16	11	11	12	16	14	16	14	21	14	16	17	14	18	20	23	26	29	29	30	32	37	40	33	509	20.
Sums.	183	181	192	190	182	180	181	170	178	164	165	138	150	172	189	198	210	201	190	205	204	**207**	205	197	4,431	Sums.
21.	30	39	40	33	39	42	45	45	34	28	29	25	30	29	33	30	30	26	31	28	25	33	28	31	783	21.
22.	22	16	9	15	15	10	12	13	14	15	21	28	29	31	32	28	30	28	32	30	32	30	25	23	540	22.
23.	20	19	19	22	22	21	19	20	20	18	18	21	23	29	27	27	32	33	34	35	32	28	26	33	598	23.
24.	35	33	34	31	34	35	36	32	35	38	41	34	31	36	36	38	39	33	34	21	16	15	16	18	751	24.
25.	15	12	12	9	10	9	6	4	11	17	21	22	25	30	27	28	29	23	16	10	9	10	11	17	383	25.
26.	17	19	18	19	17	16	23	22	19	20	30	33	34	33	31	39	36	40	36	25	39	42	27	16	651	26.
27.	8	6	8	14	12	12	16	17	19	18	19	20	20	12	16	17	18	18	15	11	17	14	14	15	356	27.
28.	14	12	13	15	14	16	15	15	15	19	17	16	15	11	8	5	2	5	8	10	10	10	5	2	272	28.
29.	5	6	13	13	11	13	17	14	17	18	23	24	26	23	25	24	25	19	21	19	20	25	24	18	443	29.
30.	17	21	21	23	24	22	19	18	20	13	8	2	3	8	9	10	9	17	7	7	2	4	6	13	303	30.
31.	16	19	15	16	20	23	21	25	22	24	28	30	27	36	39	40	39	39	36	38	35	39	39	41	707	31.
Sums.	199	202	202	210	218	219	229	225	226	228	255	255	263	278	283	286	**289**	281	270	234	237	250	221	227	5,787	Sums.
Monthly Sums.	649	658	670	655	652	643	655	654	670	683	723	664	702	755	752	769	**789**	764	737	728	733	742	697	678	16,821	Monthly Sums.
Means.	21.0	21.2	21.6	21.1	21.0	20.8	21.1	21.1	21.6	22.0	23.3	21.4	22.6	24.3	24.3	24.8	**2.54**	24.6	23.8	23.5	23.6	23.9	22.5	21.8	22.6	Means.

APRIL.

	P. M.									A. M.										P. M.						
Date.	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	53	51	53	49	52	41	35	37	29	32	32	37	36	42	39	36	36	35	35	33	26	22	19	19	879	1.
2.	19	19	18	19	18	19	22	19	19	19	21	30	29	31	29	30	35	34	29	26	25	21	20	15	566	2.
3.	13	8	9	11	7	8	6	4	1	4	5	5	4	7	6	10	11	4	4	1	2	2	9	8	149	3.
4.	12	20	18	24	23	20	21	19	13	20	19	18	18	19	16	13	13	13	9	8	7	7	8	6	364	4.
5.	5	3	1	0	2	5	6	4	6	6	7	10	8	9	10	11	11	12	13	11	12	9	10	10	181	5.
6.	13	19	23	27	32	29	35	37	38	44	48	52	48	55	56	58	52	55	50	32	24	13	14	15	869	6.
7.	17	13	6	3	4	4	8	11	8	13	15	10	14	15	11	19	19	20	18	16	17	15	16	12	304	7.
8.	12	12	12	11	11	13	13	11	9	11	12	10	12	14	8	6	13	14	12	16	18	20	18	19	307	8.
9.	21	18	16	15	14	15	17	15	12	13	12	13	13	13	17	25	26	22	16	17	19	15	19	19	402	9.
10.	20	19	23	26	24	24	25	19	15	21	17	20	21	24	25	32	36	32	31	28	30	30	34	24	600	10.
Sums.	185	182	179	185	187	178	188	176	150	183	188	205	203	229	217	240	**252**	241	217	188	180	154	167	147	4,621	Sums.
11.	25	27	21	19	17	17	16	15	19	23	21	20	19	18	16	16	13	12	13	13	19	19	21	19	438	11.
12.	16	16	15	15	16	17	15	16	13	17	16	14	18	24	23	24	22	21	21	21	24	22	21	18	445	12.
13.	20	19	18	17	18	20	20	19	19	19	21	18	16	21	21	21	21	18	15	12	12	11	11	10	417	13.
14.	10	13	15	17	21	19	23	22	21	19	22	21	20	18	16	14	9	8	8	11	11	12	12	12	374	14.
15.	12	8	6	8	9	8	9	7	6	7	8	9	8	5	5	10	16	15	13	13	14	11	16	16	239	15.
16.	16	17	15	14	17	14	13	13	12	15	14	11	11	8	13	15	17	16	15	14	14	12	12	8	326	16.
17.	1	1	3	2	1	1	3	6	5	4	5	6	6	10	8	9	9	12	12	14	14	14	14	13	173	17.
18.	15	16	19	20	20	18	16	14	13	8	6	4	7	6	9	9	10	16	17	18	15	14	18	21	329	18.
19.	21	21	18	18	17	20	22	23	18	13	12	13	15	12	17	14	12	10	10	12	12	8	7	15	360	19.
20.	18	25	24	21	23	19	16	16	19	21	25	17	17	16	15	15	12	12	10	11	14	13	13	14	406	20.
Sums.	154	**163**	154	151	159	153	153	151	145	146	150	133	137	138	143	147	141	140	134	138	149	136	145	146	3,507	Sums.
21.	12	12	13	16	17	19	19	19	17	15	14	12	11	14	12	15	18	18	16	14	14	16	18	18	368	21.
22.	19	18	19	16	15	18	19	21	23	21	21	20	16	16	16	17	18	17	17	14	12	14	14	15	416	22.
23.	13	12	13	17	18	17	21	19	14	16	15	17	19	22	21	18	18	16	14	15	17	22	23	23	420	23.
24.	20	22	25	26	24	25	30	21	23	24	26	26	20	20	17	13	16	16	12	9	5	3	4	7	434	24.
25.	5	2	4	18	26	25	23	25	21	21	21	16	14	12	7	7	7	10	16	19	19	19	16	17	370	25.
26.	17	16	17	17	13	12	14	7	6	7	7	6	8	15	17	19	11	12	21	22	20	21	30	31	366	26.
27.	25	26	25	22	18	18	18	15	14	13	13	13	11	9	11	11	14	13	14	13	14	17	19	18	384	27.
28.	21	20	18	16	19	14	10	9	10	10	10	9	9	11	20	18	19	18	14	11	9	6	8	7	316	28.
29.	8	11	12	12	1	4	10	11	13	18	19	18	19	20	20	17	16	16	10	8	9	9	9	10	300	29.
30.	17	16	19	22	23	21	22	24	28	28	27	31	28	29	25	24	24	18	14	11	8	6	5	1	471	30.
Sums.	157	153	165	182	174	173	**186**	171	169	173	173	168	155	168	166	159	161	154	148	136	127	133	146	147	3,845	Sums.
Monthly Sums.	496	500	498	518	520	504	527	498	464	502	509	506	495	535	526	**566**	554	535	499	462	456	423	458	440	11,973	Monthly Sums.
Means.	16.5	16.7	16.6	17.3	17.3	16.8	17.6	16.6	15.5	16.7	17.0	16.9	16.5	17.8	17.5	**18.9**	18.5	17.8	16.6	15.4	15.2	14.1	15.3	14.7	16.6	Means.

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Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	4	1	4	12	13	14	15	10	10	13	13	15	15	16	18	19	18	19	18	16	18	13	16	19	329	1.
2.	20	21	23	28	22	24	26	31	30	33	30	33	33	30	29	26	26	24	19	15	12	13	15	14	577	2.
3.	17	17	13	15	15	12	15	12	9	7	7	5	7	10	18	22	26	28	29	27	30	26	27	23	417	3.
4.	23	24	23	22	20	22	21	20	18	19	14	12	15	19	19	20	26	26	23	20	19	20	23	21	489	4.
5.	19	19	21	17	20	20	16	17	15	19	20	21	32	34	29	24	28	24	17	12	7	14	15	18	488	5.
6.	18	16	19	26	24	18	16	10	15	15	12	10	8	9	12	8	11	11	6	7	9	9	7	8	304	6.
7.	9	13	10	4	12	14	16	15	12	7	9	13	12	11	15	18	21	22	25	22	20	19	19	14	352	7.
8.	12	11	9	13	18	17	15	20	26	34	37	34	32	33	29	30	26	30	30	34	27	29	28	27	601	8.
9.	32	33	30	36	34	26	26	30	32	31	28	36	36	40	35	33	39	38	30	20	22	21	21	20	729	9.
10.	18	23	20	18	16	14	12	8	9	7	7	5	5	5	10	22	20	18	20	21	19	15	16	14	342	10.
Sums.	172	178	182	191	194	181	178	173	176	185	177	184	195	207	214	222	**241**	240	217	194	183	179	187	178	4,628	Sums.
11.	20	27	26	26	27	19	20	29	26	26	30	27	25	28	25	26	32	28	27	20	19	18	17	15	585	11.
12.	14	15	10	10	11	8	10	11	13	6	6	9	9	9	11	7	3	8	7	7	9	8	7	6	214	12.
13.	7	3	2	3	6	3	8	7	6	10	11	14	15	19	19	16	21	18	14	15	16	16	13	16	278	13.
14.	23	16	21	24	25	29	27	23	16	20	21	23	18	13	13	14	17	13	13	13	13	11	13	10	429	14.
15.	13	5	2	3	1	6	9	10	13	14	11	10	11	11	12	16	20	20	18	18	24	27	24	21	319	15.
16.	30	34	35	36	33	32	27	30	28	20	20	17	19	13	9	7	10	13	7	14	21	25	19	18	517	16.
17.	20	24	24	24	16	22	21	20	22	24	19	22	25	22	19	22	21	21	15	11	12	13	10	6	435	17.
18.	7	5	8	10	12	13	13	10	8	8	9	9	11	15	19	20	25	25	28	25	23	20	25	23	369	18.
19.	20	20	18	19	18	17	16	17	19	20	25	26	28	34	30	28	26	23	26	27	21	20	21	20	539	19.
20.	21	21	21	25	22	21	26	25	24	28	28	31	28	25	25	24	23	20	24	29	29	21	21	20	582	20.
Sums.	175	170	167	180	171	170	177	173	175	176	180	188	189	179	192	180	**198**	189	179	179	187	179	169	155	4,267	Sums.
21.	18	21	18	21	20	20	20	19	20	21	22	21	20	17	19	21	22	24	21	18	18	14	7	10	452	21.
22.	7	11	14	9	9	13	14	16	20	20	24	28	22	20	20	21	23	20	18	17	18	18	16	16	417	22.
23.	14	17	15	13	14	14	17	16	15	15	10	11	14	16	17	15	10	14	14	17	18	13	11	8	338	23.
24.	11	18	18	19	21	23	22	21	15	8	8	6	5	4	5	7	7	12	15	17	19	17	13	13	324	24.
25.	13	15	15	19	20	13	11	7	3	4	6	10	14	18	23	22	27	26	29	33	25	28	27	33	441	25.
26.	29	34	23	22	24	24	27	30	33	33	36	35	32	26	26	31	24	21	22	21	19	16	18	23	628	26.
27.	23	27	27	26	29	25	23	22	19	23	27	22	24	25	29	27	26	23	21	19	21	20	19	20	567	27.
28.	16	15	17	19	22	18	15	15	14	13	10	11	8	9	7	9	17	11	10	13	16	17	16	13	331	28.
29.	10	12	14	14	18	15	13	11	6	6	7	12	11	11	10	10	8	12	13	15	17	18	19	20	302	29.
30.	21	23	21	21	19	19	20	19	14	14	10	14	13	17	19	20	20	22	23	17	16	14	15	16	427	30.
31.	16	12	13	15	18	17	12	21	19	18	13	10	7	11	7	7	10	11	9	9	5	3	2	5	260	31.
Sums.	178	205	195	198	**214**	201	194	197	178	175	173	180	170	174	182	190	194	196	195	192	196	178	163	177	4,487	Sums.
Monthly Sums.	525	553	544	569	579	552	549	543	529	536	530	552	554	560	588	592	**633**	625	591	565	566	556	519	510	13,382	Monthly Sums.
Means.	17.0	17.8	17.5	18.3	18.7	17.8	17.7	17.5	17.1	17.3	17.1	17.8	17.8	18.1	19.0	19.1	**20.4**	20.2	19.1	18.2	18.2	17.9	16.8	16.5	18.0	Means.

JUNE.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	10	15	19	21	22	22	17	15	12	8	10	10	12	12	15	14	11	15	14	14	17	19	18	20	362	1.
2.	18	18	19	18	17	17	16	11	10	12	15	20	24	24	22	22	26	22	25	23	22	23	29	26	479	2.
3.	25	29	29	32	28	33	28	31	30	30	25	20	19	13	20	21	19	18	18	15	20	27	23	30	573	3.
4.	19	21	19	18	19	18	18	18	12	9	6	5	4	3	2	9	22	21	21	24	23	23	22	22	378	4.
5.	21	19	21	17	15	15	11	12	11	7	10	11	12	13	15	18	13	14	19	19	20	20	18	17	388	5.
6.	14	13	13	14	15	12	15	12	13	14	10	9	9	10	11	11	12	16	19	17	18	15	15	17	324	6.
7.	15	19	19	15	15	14	17	16	12	14	15	17	17	18	17	17	20	15	18	16	12	13	18	18	387	7.
8.	20	23	24	22	24	24	22	21	20	22	24	22	23	19	21	21	22	23	16	15	14	20	24	19	505	8.
9.	22	20	18	14	10	10	12	9	3	4	7	10	16	16	19	19	23	24	23	23	18	22	27	25	394	9.
10.	21	20	14	11	7	5	5	7	5	7	8	10	4	5	4	4	5	4	6	9	10	9	8	17	205	10.
Sums.	195	197	195	182	172	170	161	152	128	127	130	134	140	133	146	156	173	172	179	175	174	191	202	**211**	3,995	Sums.
11.	20	19	19	20	19	18	17	20	16	12	12	13	13	12	12	11	11	11	10	10	10	8	9	6	328	11.
12.	6	9	20	22	23	28	26	23	18	17	16	15	17	16	12	12	17	17	15	18	10	6	8	7	368	12.
13.	3	4	3	5	7	7	5	4	6	8	5	6	6	8	11	11	7	7	9	13	14	16	16	15	196	13.
14.	14	13	21	25	20	15	17	12	12	14	16	17	20	22	16	13	12	11	11	11	14	18	16	16	375	14.
15.	10	14	14	13	15	13	10	13	15	14	14	10	6	11	10	7	9	6	9	8	7	6	7	4	245	15.
16.	5	2	3	5	5	6	3	2	1	2	5	7	9	12	15	14	15	16	12	15	19	17	16	16	222	16.
17.	16	19	21	19	17	16	17	16	15	18	20	17	18	21	23	22	24	21	19	22	20	21	23	24	469	17.
18.	25	25	28	25	24	22	25	28	26	28	29	33	26	24	28	27	32	26	20	16	19	23	22	22	606	18.
19.	21	19	16	15	14	17	16	17	15	14	14	8	8	9	9	7	6	5	6	9	10	12	11	13	291	19.
20.	11	15	15	11	14	14	15	14	8	7	7	4	4	8	7	10	10	13	16	16	17	16	17	14	283	20.
Sums.	131	139	**160**	**160**	158	158	151	149	132	134	138	130	127	143	143	134	143	133	126	128	140	143	145	137	3,383	Sums.
21.	14	16	18	18	17	15	16	14	11	6	4	6	7	9	11	9	11	18	20	18	19	15	18	21	331	21.
22.	20	24	22	20	20	16	15	14	10	11	10	12	9	8	9	12	9	10	10	14	15	15	17	17	339	22.
23.	16	12	11	10	8	5	5	6	9	13	9	10	9	6	5	5	16	12	14	14	16	17	16	16	260	23.
24.	19	19	21	20	18	20	18	18	18	18	18	19	16	18	15	18	17	15	15	16	17	18	18	15	424	24.
25.	14	11	11	8	9	8	4	3	2	3	3	4	4	3	5	4	2	4	3	5	3	4	6	4	127	25.
26.	11	14	13	11	14	16	16	14	14	16	12	14	14	20	21	27	29	27	24	23	20	20	22	23	435	26.
27.	19	21	21	22	20	22	20	19	23	26	32	28	29	28	32	27	23	22	27	20	18	18	20	14	551	27.
28.	14	13	8	5	4	6	9	8	10	11	13	14	11	10	6	6	5	5	2	4	7	9	12	12	204	28.
29.	16	21	22	20	20	22	21	16	17	20	23	26	26	26	32	29	32	28	29	22	22	25	25	24	564	29.
30.	23	24	18	14	10	6	8	8	11	19	21	21	19	18	15	16	18	13	13	13	15	15	13	6	357	30.
Sums.	166	**175**	165	148	140	136	132	120	125	143	135	153	144	146	150	153	172	154	157	149	152	156	167	152	3,591	Sums.
Monthly Sums.	492	511	**520**	490	470	464	444	421	385	404	403	417	411	422	439	443	488	459	462	452	466	490	514	500	10,969	Monthly Sums.
Means.	16.4	17.0	**17.3**	16.3	15.7	15.5	14.8	14.0	12.8	13.5	13.4	13.9	13.7	14.1	14.6	14.8	16.3	15.3	15.4	15.1	15.5	16.3	17.1	16.7	15.2	Means.

JULY.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	9	14	14	14	14	12	12	10	6	6	5	5	5	6	6	8	10	13	16	16	17	18	17	19	272	1.
2.	21	22	22	20	21	17	19	19	17	15	12	15	15	15	11	12	13	14	15	14	16	16	17	16	394	2.
3.	15	16	15	12	12	14	15	15	12	5	7	9	10	6	6	8	9	9	9	9	12	12	13	12	262	3.
4.	10	15	15	15	12	10	5	4	3	2	4	4	6	6	8	10	15	15	14	16	19	19	17	19	263	4.
5.	19	21	21	20	18	18	19	16	14	7	6	5	4	9	11	15	11	8	9	11	11	10	15	16	314	5.
6.	17	18	20	20	21	19	19	17	14	12	12	14	13	19	21	23	23	21	20	20	20	22	25	23	452	6.
7.	23	24	25	25	27	27	25	23	23	27	30	27	30	28	29	30	31	27	19	20	19	15	19	19	592	7.
8.	15	16	22	16	21	21	20	17	14	13	14	12	7	4	5	8	8	3	6	5	3	11	17	13	289	8.
9.	15	21	21	19	19	22	22	21	23	23	20	19	18	18	16	17	15	14	16	17	20	21	16	12	445	9.
10.	13	8	9	9	11	11	12	6	5	7	8	6	6	9	11	13	15	10	6	6	5	4	5	6	201	10.
Sums.	157	175	184	171	175	171	168	148	131	117	118	116	114	120	124	144	150	134	130	134	142	148	161	155	3,484	Sums.
11.	11	11	12	11	13	14	14	13	17	18	22	23	22	19	21	22	21	21	18	18	22	22	26	29	440	11.
12.	25	20	16	14	14	15	16	10	6	5	7	12	13	11	15	17	13	13	11	6	9	10	8	12	298	12.
13.	17	18	14	10	9	10	7	8	5	5	6	10	11	15	14	17	21	27	29	22	21	21	23	21	361	13.
14.	15	12	14	11	10	13	11	12	13	14	15	22	21	19	19	22	24	24	22	23	19	17	16	15	403	14.
15.	12	9	12	16	15	16	17	22	19	8	7	14	18	19	23	23	27	24	24	24	23	27	24	24	447	15.
16.	26	23	23	23	22	25	24	24	37	37	34	24	30	32	25	22	21	22	22	23	15	19	20	18	591	16.
17.	19	18	19	15	13	13	11	11	13	11	13	9	9	11	10	10	13	15	16	13	14	12	13	12	313	17.
18.	11	12	11	12	9	10	6	7	5	6	8	9	9	14	16	16	15	15	14	10	14	18	14	11	272	8.
19.	14	19	21	18	15	11	3	4	8	13	14	15	17	14	15	18	18	17	18	17	15	17	19	20	360	19.
20.	20	20	17	12	11	15	9	11	12	7	3	3	5	5	9	7	8	12	16	17	19	16	14	13	280	20.
Sums.	170	162	159	142	131	142	118	122	135	124	129	142	155	161	167	174	181	**190**	**190**	173	171	179	177	175	3,765	Sums.
21.	14	16	13	14	16	16	15	12	5	3	3	6	9	10	10	10	13	12	14	12	15	12	11	10	271	21.
22.	8	8	7	10	11	12	10	9	9	7	7	6	7	6	9	16	19	17	14	13	14	18	17	16	270	22.
23.	15	16	17	20	15	15	15	12	11	9	12	12	9	8	7	9	15	12	9	12	12	13	12	11	298	23.
24.	8	4	3	6	8	12	15	16	9	8	9	14	18	17	17	20	19	19	15	12	12	9	14	12	296	24.
25.	10	11	10	9	8	9	8	8	8	6	8	8	12	14	16	19	21	18	19	19	19	20	21	22	325	25.
26.	23	22	23	26	24	22	22	24	23	26	23	20	19	16	14	13	19	25	26	21	18	16	18	17	500	26.
27.	16	15	14	13	14	16	18	21	19	21	20	21	21	21	25	20	16	11	14	11	14	15	9	11	396	27.
28.	12	11	9	12	12	9	9	11	10	8	4	4	7	8	4	11	14	16	14	13	14	17	17	17	263	28.
29.	15	15	15	15	12	7	7	9	7	4	9	10	12	15	16	19	19	20	26	25	23	25	24	22	371	29.
30.	21	23	14	17	16	14	16	17	14	15	12	8	5	8	13	11	14	13	13	8	9	8	8	8	305	30.
31.	10	11	8	9	9	13	9	11	8	12	10	11	4	3	4	13	11	11	11	12	15	15	17	12	249	31.
Sums.	152	152	133	151	145	145	144	150	123	119	117	120	123	126	134	161	**181**	174	175	158	165	168	168	158	3,544	Sums.
Monthly Sums.	479	489	476	464	451	458	420	420	389	360	364	378	392	407	426	479	**511**	498	495	465	478	495	506	488	10,793	Monthly Sums.
Means.	15.5	15.8	15.4	15.0	14.6	14.8	13.5	13.5	12.5	11.6	11.7	12.2	12.7	13.1	13.7	15.4	**16.5**	16.1	16.0	15.0	15.5	16.0	16.3	15.8	14.5	Means.

AUGUST.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	A. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	16	15	13	13	13	11	10	6	3	4	7	8	9	9	10	10	10	14	18	18	18	18	17	15	282	1.
2.	13	12	12	14	13	6	4	4	9	15	17	19	14	22	24	26	25	23	22	17	22	25	21	20	398	2.
3.	23	22	27	24	20	21	20	19	20	29	30	24	31	34	36	39	26	29	26	24	22	25	24	23	618	3.
4.	26	25	25	26	22	21	25	15	20	22	22	20	16	13	13	15	16	14	13	15	15	15	13	19	446	4.
5.	19	18	18	17	17	16	16	13	10	8	5	8	9	11	12	13	14	14	16	15	14	16	14	8	321	5.
6.	10	9	11	4	3	3	7	10	6	8	6	6	6	6	6	5	8	9	11	8	12	15	12	11	192	6.
7.	9	9	4	3	6	3	6	10	11	13	11	13	15	17	16	17	20	20	21	21	24	21	21	22	333	7.
8.	28	32	37	29	24	21	27	23	20	17	18	16	11	6	4	8	9	6	8	12	17	17	17	16	422	8.
9.	20	20	18	18	14	17	17	16	10	9	8	12	16	16	16	17	18	18	17	20	19	21	20	20	397	9.
10.	18	17	22	21	17	16	21	18	15	16	16	20	21	21	22	24	23	26	23	20	21	20	19	15	472	10.
Sums.	182	179	187	169	149	135	153	134	124	141	140	146	148	155	159	174	169	173	174	171	184	**193**	178	169	3,881	Sums.
11.	21	19	21	21	24	22	19	17	17	16	12	15	14	16	15	18	16	20	20	16	17	20	16	15	427	11.
12.	18	18	21	20	18	18	18	17	16	14	14	17	16	11	14	13	11	18	12	11	11	7	11	9	353	12.
13.	10	10	11	9	8	6	8	8	7	7	10	12	17	17	20	19	17	15	17	16	21	24	25	24	338	13.
14.	24	24	26	23	25	23	20	22	22	23	19	23	24	21	20	11	17	20	17	18	17	22	22	19	502	14.
15.	24	27	21	23	24	21	19	18	26	25	24	20	21	20	18	15	14	11	10	11	9	8	9	6	424	15.
16.	6	5	4	2	5	6	2	1	4	7	10	11	15	14	24	27	27	23	20	25	29	29	31	38	365	16.
17.	33	25	27	29	24	27	24	27	23	20	20	15	11	15	14	9	9	8	7	6	7	9	9	7	405	17.
18.	6	4	4	4	2	8	11	10	12	11	12	14	10	11	10	10	7	10	11	10	8	9	9	11	214	18.
19.	11	13	11	12	14	11	12	13	10	9	8	9	6	7	10	10	14	11	9	11	10	10	11	11	253	19.
20.	9	7	8	4	2	4	5	5	6	6	5	6	7	5	8	10	13	12	14	17	18	20	18	16	225	20.
Sums.	162	152	154	147	146	146	138	138	143	138	134	142	141	137	153	142	145	148	137	141	147	158	**161**	156	3,508	Sums.
21.	14	13	7	8	7	6	6	4	4	3	5	7	9	9	6	12	16	17	16	17	19	16	15	16	252	21.
22.	12	10	10	5	6	12	16	17	13	19	20	22	23	27	26	21	19	16	17	15	18	19	17	18	398	22.
23.	19	16	17	16	15	15	12	12	9	6	10	9	9	9	10	10	10	17	16	13	15	13	13	11	302	23.
24.	13	12	12	14	16	19	18	16	5	7	10	17	16	13	14	16	15	9	15	16	12	11	7	4	306	24.
25.	4	6	10	10	13	19	21	27	27	28	32	28	32	34	29	31	25	24	25	22	21	21	19	13	519	25.
26.	16	20	18	16	16	16	10	10	11	10	14	16	15	13	12	14	17	17	18	17	18	17	14	14	359	26.
27.	15	15	17	15	18	18	17	14	12	15	10	5	4	5	7	11	14	12	12	14	20	20	22	18	330	27.
28.	15	16	14	11	9	6	9	13	11	10	9	4	3	5	6	7	7	4	7	8	9	10	9	11	209	28.
29.	12	11	12	11	11	12	12	13	12	15	16	17	16	18	18	18	14	11	10	11	14	10	6	2	302	29.
30.	1	3	4	5	6	4	5	7	5	4	3	7	10	8	11	11	12	14	15	16	19	21	20	19	237	30.
31.	15	15	15	16	14	15	14	18	17	16	21	28	26	26	23	16	13	16	17	22	20	18	18	15	434	31.
Sums.	137	137	136	127	131	143	140	151	126	133	150	160	163	167	162	167	162	157	168	171	**185**	176	160	141	3,648	Sums.
Monthly Sums.	481	468	477	443	426	424	431	423	393	412	424	448	452	459	474	483	476	478	479	483	516	527	499	466	11,037	Monthly Sums.
Means.	15.5	15.1	15.4	14.3	13.7	13.7	13.9	13.6	12.7	13.3	13.7	14.4	14.6	14.8	15.3	15.6	15.4	15.5	15.5	15.6	16.6	**17.0**	16.1	15.0	14.8	Means.

SEPTEMBER.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	14	17	13	13	16	15	17	16	16	16	25	24	27	23	22	20	17	16	11	18	16	17	14	13	416	1.
2.	14	13	14	18	18	17	15	11	8	6	6	3	3	6	6	8	6	4	8	10	17	15	15	15	256	2.
3.	15	14	12	17	15	14	17	15	17	18	18	17	15	17	15	13	12	15	16	13	13	16	16	14	364	3.
4.	13	14	13	17	17	15	16	17	17	15	16	16	16	17	17	16	16	14	13	14	15	12	10	8	354	4.
5.	9	10	8	10	11	10	9	9	8	10	9	9	10	8	7	7	7	6	8	10	8	6	4	4	197	5.
6.	5	4	5	5	5	5	7	6	4	5	6	4	9	10	9	10	13	15	14	16	16	15	12	12	212	6.
7.	12	12	10	10	8	7	6	6	5	6	8	10	14	14	14	16	18	19	19	16	17	17	15	15	294	7.
8.	16	16	15	15	13	17	18	17	19	20	17	17	22	23	24	24	23	24	20	22	20	21	20	20	463	8.
9.	20	22	23	19	15	14	16	16	16	13	15	17	17	16	18	20	16	19	20	15	16	12	11	7	393	9.
10.	10	5	9	16	21	24	21	18	15	14	14	10	9	6	6	6	4	6	6	3	4	1	2	6	236	10.
Sums.	128	127	122	140	139	138	**142**	131	125	123	134	127	**142**	140	138	140	132	138	135	137	**142**	132	119	114	3,185	Sums.
11.	7	9	14	12	10	12	15	17	15	14	13	25	25	24	21	21	19	14	14	16	17	20	21	18	393	11.
12.	14	7	6	3	4	8	12	19	19	21	25	26	24	32	35	30	32	30	33	34	35	35	33	30	547	12.
13.	21	22	11	12	14	12	16	13	17	19	16	17	19	22	21	23	25	24	25	17	19	17	12	8	422	13.
14.	2	3	3	7	15	21	25	28	27	25	28	32	29	32	34	30	29	24	27	24	27	23	21	20	536	14.
15.	18	16	15	14	14	13	14	9	7	8	10	12	17	20	20	20	20	16	18	19	20	20	19	17	376	15.
16.	18	17	14	16	16	16	18	14	15	17	17	16	17	14	10	11	11	14	17	17	22	22	24	20	393	16.
17.	17	17	16	17	14	16	19	20	18	14	18	17	22	24	25	26	23	29	26	20	17	20	20	18	473	17.
18.	14	15	18	23	21	28	30	30	34	29	21	21	18	18	21	19	15	8	9	10	9	7	6	5	429	18.
19.	6	11	10	6	10	16	19	19	22	27	25	24	22	16	27	35	30	33	35	36	31	32	33	36	561	19.
20.	33	35	29	24	23	24	22	23	28	32	28	33	34	29	32	38	33	37	36	20	15	15	16	15	654	20.
Sums.	150	152	136	134	141	166	190	192	202	206	201	223	227	231	246	**250**	237	239	240	213	212	211	205	187	4,786	Sums.
21.	16	18	18	19	16	18	19	18	16	15	19	20	25	24	20	23	25	25	14	16	19	20	24	24	471	21.
22.	23	22	20	21	21	18	16	11	11	13	12	11	8	9	9	9	9	6	6	7	9	11	13	15	310	22.
23.	16	12	11	9	11	16	17	19	14	16	20	25	32	25	22	16	20	20	18	19	18	18	18	16	428	23.
24.	14	15	13	13	12	10	8	7	11	11	11	6	7	7	7	8	10	14	14	19	20	19	22	21	299	24.
25.	17	22	24	20	20	21	20	22	21	20	16	15	12	12	10	11	12	14	17	19	18	18	18	21	420	25.
26.	21	21	22	22	25	23	27	24	24	24	26	31	34	32	28	26	27	29	27	27	29	33	29	27	638	26.
27.	25	24	21	18	18	16	17	18	17	13	13	14	15	13	12	14	9	18	23	25	27	21	19	18	428	27.
28.	14	17	15	16	13	16	15	13	9	12	11	9	7	12	11	13	6	5	4	5	3	5	9	14	254	28.
29.	20	24	26	27	24	22	21	24	22	26	23	21	19	22	13	8	10	8	3	4	8	16	13	9	413	29.
30.	6	8	8	10	12	13	11	10	9	7	10	9	9	9	9	12	13	12	11	11	9	9	12	12	241	30.
Sums.	172	**183**	178	175	172	173	171	166	154	157	171	161	168	165	141	140	141	151	137	152	160	170	177	177	3,902	Sums.
Monthly Sums.	450	462	436	449	452	477	503	489	481	486	506	511	**537**	536	525	530	510	528	512	502	514	513	501	478	11,873	Monthly Sums.
Means.	15.0	15.4	14.5	15.0	15.1	15.9	16.8	16.3	16.0	16.2	16.9	17.0	**17.9**	17.9	17.5	17.7	17.0	17.6	17.1	16.7	17.1	17.1	16.7	15.9	16.5	Means.

OCTOBER.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	13	16	12	10	9	5	7	11	10	14	14	17	15	23	28	32	31	24	33	31	29	27	25	26	462	1.
2.	16	16	18	20	16	18	13	13	14	15	14	18	19	21	21	22	20	19	19	17	17	17	14	14	411	2.
3.	14	12	8	7	4	1	5	7	8	8	8	8	10	9	10	10	12	12	14	15	14	18	21	25	260	3.
4.	21	24	23	19	19	20	17	24	20	15	16	14	18	15	19	17	18	16	14	17	19	19	19	23	446	4.
5.	14	11	14	19	22	21	20	21	18	19	24	28	21	20	19	14	13	8	7	6	7	8	6	4	364	5.
6.	1	5	3	5	7	15	12	10	6	9	9	5	4	6	6	6	7	8	10	7	5	7	5	9	167	6.
7.	14	19	18	21	23	22	21	23	24	25	28	32	29	29	23	23	19	16	15	15	13	10	12	10	484	7.
8.	9	9	9	7	9	8	9	7	5	5	6	5	4	4	6	7	8	7	13	17	16	16	22	25	233	8.
9.	22	25	19	19	18	18	19	19	19	15	11	9	10	8	8	10	10	9	13	13	16	20	18	16	355	9.
10.	19	23	20	19	18	17	15	13	15	16	15	10	10	7	7	6	6	8	8	8	10	10	13	11	304	10.
Sums.	143	160	144	146	145	145	138	148	139	141	143	146	140	142	147	147	144	127	146	146	146	142	155	**163**	3,486	Sums.
11.	11	13	12	16	15	17	16	17	19	16	14	14	15	17	16	20	18	19	18	15	20	18	19	20	395	11.
12.	20	22	24	21	23	21	20	18	17	12	12	12	12	14	17	14	17	16	17	22	28	13	21	17	430	12.
13.	19	24	27	32	27	21	22	18	20	20	18	19	19	15	12	11	12	10	9	8	9	10	8	8	398	13.
14.	8	8	6	9	8	14	17	16	14	13	14	11	13	16	19	20	22	19	23	18	18	18	24	32	380	14.
15.	34	35	37	38	36	38	34	26	22	24	24	26	25	27	29	23	28	34	36	36	32	35	32	34	745	15.
16.	33	27	36	27	26	30	36	28	30	38	38	40	40	40	31	31	28	28	20	18	22	23	24	23	717	16.
17.	23	19	18	12	10	12	7	8	4	4	5	8	10	15	15	16	23	23	22	18	19	15	17	19	342	17.
18.	21	25	24	26	22	20	22	17	13	10	10	8	12	10	14	15	12	15	11	8	11	14	14	13	367	18.
19.	13	13	9	8	7	10	10	11	12	11	7	9	9	10	10	8	7	9	15	18	19	19	15	16	275	19.
20.	17	16	15	15	15	15	15	17	18	11	13	15	15	18	17	18	19	18	20	20	23	23	22	23	418	20.
Sums.	199	202	**208**	204	189	198	199	176	169	159	155	162	170	182	180	176	186	191	191	181	201	188	196	205	4,467	Sums.
21.	24	25	24	28	22	23	26	29	26	29	29	28	26	31	31	34	30	30	25	20	17	18	17	20	612	21.
22.	22	17	14	7	9	9	8	9	9	9	12	16	19	21	23	25	26	24	25	20	27	21	21	26	409	22.
23.	26	21	23	22	24	24	24	20	19	27	25	22	19	17	17	17	13	8	7	9	10	7	14	19	434	23.
24.	20	19	18	18	17	16	17	18	16	17	20	19	16	16	14	14	12	12	11	10	13	14	17	19	383	24.
25.	19	19	17	14	12	13	14	15	20	21	21	27	27	25	25	22	18	23	13	14	14	16	20	18	437	25.
26.	17	16	17	14	13	10	9	10	15	21	26	19	24	21	25	23	23	23	21	20	18	20	17	22	444	26.
27.	23	26	23	22	20	23	25	23	23	24	25	29	26	27	32	35	33	32	32	26	30	31	29	27	646	27.
28.	25	27	26	24	28	25	24	19	18	17	19	24	21	21	21	21	21	21	23	28	24	22	23	24	546	28.
29.	25	26	27	22	23	24	26	30	28	33	31	33	31	30	32	31	33	36	31	33	30	32	31	34	732	29.
30.	35	32	38	36	34	35	37	33	37	25	28	30	28	29	24	29	30	24	25	32	34	33	35	37	760	30.
31.	35	43	41	40	25	22	19	23	23	20	17	17	18	19	20	17	19	21	22	18	17	21	22	22	561	31.
Sums.	**271**	**271**	268	247	227	224	229	229	234	243	253	264	255	257	264	268	258	244	235	240	234	235	246	268	5,964	Sums.
Monthly Sums.	613	633	620	597	561	567	566	553	542	543	551	572	565	581	591	591	588	562	572	567	581	565	597	**636**	13,917	Monthly Sums.
Means.	19.8	20.4	20.0	19.3	18.1	18.3	18.3	17.8	17.5	17.5	17.8	18.4	18.2	18.8	19.1	19.1	19.0	18.1	18.4	18.3	18.8	18.2	19.3	**20.5**	18.7	Means.

NOVEMBER.

Date.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	20	22	19	21	19	18	21	17	16	18	17	11	12	8	3	2	1	3	2	3	6	8	10	13	290	1.
2.	19	19	19	19	20	17	19	15	16	12	12	8	7	5	3	2	8	8	8	9	10	13	13	14	293	2.
3.	15	16	14	15	15	12	15	15	16	15	16	18	17	18	17	18	22	22	24	21	17	17	18	21	414	3.
4.	22	24	26	29	27	24	21	21	24	24	37	31	36	35	30	36	34	29	33	26	30	20	16	15	650	4.
5.	14	18	16	13	9	9	8	7	9	14	14	14	17	21	25	23	28	23	25	27	30	26	26	25	441	5.
6.	21	23	23	21	14	18	17	17	20	20	21	20	21	25	21	27	31	33	28	19	21	21	22	16	520	6.
7.	14	19	17	27	42	39	34	43	39	45	50	47	47	49	42	40	34	27	27	28	24	26	27	17	804	7.
8.	18	19	19	20	20	23	25	23	21	23	22	26	31	27	28	27	21	21	23	21	21	20	20	23	542	8.
9.	23	26	22	20	22	20	19	20	20	20	21	22	24	27	21	17	17	14	20	20	17	19	19	19	489	9.
10.	17	13	14	11	10	12	17	16	16	17	15	15	18	18	15	8	3	7	6	6	7	11	13	12	297	10.
Sums.	183	199	189	196	198	192	196	194	197	208	225	212	230	**233**	205	200	199	187	196	180	183	181	184	175	4.740	Sums.
11.	15	16	11	11	12	13	11	10	13	11	8	8	9	13	14	14	11	18	17	14	17	18	13	16	313	11.
12.	16	18	21	22	19	16	18	19	16	11	10	5	6	3	4	7	11	10	14	14	18	17	18	27	337	12.
13.	28	38	38	41	40	44	49	36	30	36	32	34	36	27	20	23	20	17	23	22	26	25	28	28	741	13.
14.	25	31	32	31	37	35	37	37	34	37	41	37	41	41	42	47	41	40	33	29	22	23	23	22	818	14.
15.	25	30	29	29	30	25	27	29	23	24	29	26	27	27	31	33	21	19	25	24	23	21	19	21	613	15.
16.	23	20	27	22	22	19	19	16	14	22	24	18	15	16	17	16	15	11	15	18	14	10	6	3	402	16.
17.	2	6	10	13	13	12	12	11	15	14	18	19	16	17	21	20	16	20	21	20	22	22	21	28	385	17.
18.	29	32	30	34	40	40	44	50	49	53	49	60	60	69	64	57	39	29	20	22	32	36	40	35	1.013	18.
19.	35	34	31	29	32	27	33	31	33	34	41	44	41	36	44	42	39	43	39	39	26	23	37	40	853	19.
20.	37	29	30	36	28	29	21	23	25	27	25	23	21	22	23	24	19	17	12	8	6	8	10	12	493	20.
Sums.	235	244	259	268	273	260	271	262	252	269	277	274	268	271	280	**283**	232	224	219	210	196	193	215	232	5.968	Sums.
21.	18	20	19	20	21	19	18	20	20	17	24	24	27	29	25	25	28	23	24	23	13	8	8	10	483	21.
22.	11	16	17	13	17	21	21	23	23	22	17	19	19	19	17	18	16	13	10	7	12	14	11	10	386	22.
23.	10	9	11	18	20	22	23	31	30	32	33	33	32	30	30	31	32	24	24	28	32	33	30	33	631	23.
24.	37	34	41	42	42	38	27	20	20	23	26	27	32	29	35	37	27	28	27	25	22	18	13	17	687	24.
25.	16	20	16	17	12	11	11	9	6	4	5	4	6	12	12	12	18	23	27	33	30	16	25	22	367	25.
26.	7	30	36	41	34	31	27	25	30	29	33	34	31	30	28	30	26	20	22	20	21	17	16	17	635	26.
27.	20	19	18	17	15	15	12	9	7	7	6	6	12	16	18	18	14	10	7	11	14	16	15	12	314	27.
28.	8	10	10	9	9	10	12	16	17	14	14	17	19	22	21	17	15	16	20	19	20	21	20	20	377	28.
29.	17	17	17	17	17	17	20	23	25	25	24	29	28	30	31	35	29	24	20	24	20	21	23	22	555	29.
30.	21	21	19	15	11	8	5	3	3	6	7	5	9	6	11	13	18	20	21	21	22	17	15	16	313	30.
Sums.	165	196	204	209	198	192	176	179	181	179	189	198	215	223	228	**236**	223	201	202	211	206	181	176	179	4,748	Sums.
Monthly Sums.	583	639	652	673	669	644	643	635	630	656	691	684	713	**727**	713	619	654	612	617	601	585	555	575	586	15,456	Monthly Sums.
Means.	19.4	21.3	21.7	22.4	22.3	21.5	21 4	21.2	21.0	21.9	23.0	22.8	23.8	**24.2**	23.8	20.6	21.8	20.4	20.6	20.0	19.5	18.5	19.2	19.5	21.5	Means.

DECEMBER.

P. M. A. M. P. M.

Date.	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Total.	Date.
1.	25	27	37	31	31	36	35	36	30	35	37	32	29	29	29	21	15	17	19	18	19	16	12	11	627	1.
2.	7	9	9	13	14	15	16	21	24	31	36	36	41	40	43	41	42	38	38	42	38	41	41	37	713	2.
3.	31	36	36	29	36	35	31	30	23	32	34	39	41	46	40	44	43	33	28	24	22	31	30	29	803	3.
4.	20	22	20	24	24	27	27	30	25	29	31	21	21	17	17	19	20	18	17	18	19	20	20	16	522	4.
5.	17	22	22	21	29	22	18	19	20	22	22	22	23	24	26	24	24	25	31	28	32	34	39	38	603	5.
6.	39	40	40	43	40	35	35	28	29	31	31	27	29	33	31	30	29	27	26	27	34	44	41	40	809	6.
7.	39	38	30	36	39	43	42	42	47	42	39	33	39	42	46	44	44	44	48	45	47	47	45	44	1,005	7.
8.	34	27	23	21	25	23	20	20	19	15	16	17	17	20	22	23	28	24	26	23	23	24	19	21	510	8.
9.	20	22	21	22	20	17	17	19	21	18	12	12	13	18	16	13	10	10	6	9	8	7	8	10	349	9.
10.	11	10	8	7	6	5	8	10	12	14	15	15	16	20	21	20	22	25	28	26	22	24	30	32	404	10.
Sums.	243	253	246	247	264	258	249	255	250	269	273	254	269	289	**291**	279	277	251	267	250	263	288	285	278	6,345	Sums.
11.	33	34	26	25	27	25	27	30	25	24	22	22	26	22	19	17	15	18	19	19	20	21	11	10	537	11.
12.	11	17	14	13	15	15	18	20	16	17	20	21	18	19	21	22	25	28	25	27	32	28	33	31	506	12.
13.	32	32	19	20	25	23	21	21	19	19	19	19	18	14	11	13	21	18	17	12	8	4	5	5	415	13.
14.	10	17	21	20	20	19	17	21	23	23	29	34	33	37	32	31	28	26	22	20	19	16	13	14	545	14.
15.	16	15	19	24	25	28	25	26	27	28	25	24	22	27	21	17	9	9	10	10	13	17	20	32	489	15.
16.	27	34	28	33	29	28	31	32	35	34	34	38	38	38	36	41	34	46	46	37	39	30	26	28	822	16.
17.	26	29	25	28	29	26	27	26	25	22	21	19	19	18	18	18	18	13	16	21	23	19	15	19	520	17.
18.	18	15	12	8	13	24	31	28	33	29	29	20	19	16	14	13	14	16	15	19	18	26	28	25	483	18.
19.	21	24	24	22	21	21	21	19	19	14	6	6	6	10	10	13	12	11	14	14	15	16	11	8	358	19.
20.	14	18	19	18	21	14	13	13	14	13	11	13	10	7	12	11	11	11	18	19	21	18	14	16	349	20.
Sums.	208	235	207	211	225	223	231	**236**	236	223	216	216	209	208	194	196	187	196	202	198	208	195	176	188	5,024	Sums.
21.	14	14	15	9	10	9	9	12	16	19	20	22	21	26	29	24	22	24	25	26	30	32	27	22	477	21.
22.	20	15	18	18	21	19	19	19	16	13	5	4	4	4	3	2	1	1	1	2	3	5	7	5	225	22.
23.	16	14	18	20	23	20	21	20	18	16	13	14	14	17	17	14	11	15	17	16	16	13	14	17	392	23.
24.	23	25	25	29	29	31	32	36	38	36	35	38	33	31	32	29	33	32	32	33	32	40	47	32	783	24.
25.	34	26	25	34	32	33	30	24	29	31	33	32	39	32	30	33	27	32	28	34	36	30	28	25	737	25.
26.	22	19	19	17	15	16	19	20	19	17	12	11	13	17	14	15	18	18	14	12	15	15	14	9	380	26.
27.	13	13	8	8	7	3	2	6	10	15	15	22	28	32	30	25	25	27	19	18	20	21	21	30	418	27.
28.	24	20	19	14	10	19	23	19	19	20	19	17	17	20	24	20	19	19	16	14	16	16	20	20	444	28.
29.	18	18	19	20	15	14	18	13	17	17	25	23	23	22	23	19	19	19	19	20	20	18	15	16	450	29.
30.	17	19	19	19	16	20	22	24	29	26	26	27	26	24	28	27	26	28	28	25	26	24	22	21	565	30.
31.	19	22	21	21	21	23	22	22	25	23	23	22	21	22	22	22	21	21	21	24	19	20	21	17	514	31.
Sums.	220	205	206	209	199	207	217	215	236	233	226	232	239	247	**252**	230	222	236	217	224	233	234	236	214	5,385	Sums.
Monthly Sums.	671	693	659	666	688	688	697	706	722	725	715	702	717	**744**	737	705	686	682	689	672	704	717	687	680	16,754	Monthly Sums.
Means.	21.6	22.3	21.3	21.5	22.2	22.2	22.5	22.8	23.3	23.4	23.1	22.7	23.1	**24.0**	23.9	22.8	22.1	22.0	22.2	21.6	22.7	23.1	22.1	21.9	22.5	Means.

ANNUAL SUMMARY.

Month.	P. M. 11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	A. M. 12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	Totals.	Means.
January *	19.4	21.6	22.0	22.3	22.9	**23.0**	22.6	21.9	21.6	21.4	21.5	22.1	20.8	20.6	20.4	20.7	19.7	18.9	19.4	19.9	20.4	20.0	19.6	19.7	502.2	20.9
February.....	24.7	26.4	25.3	25.1	26.1	26.9	25.9	26.1	25.4	24.4	25.1	24.8	26.2	26.3	25.4	26.6	26.3	26.5	27.8	**28.8**	28.6	28.2	28.4	26.9	**633.1**	**26.4**
March	21.0	21.2	21.6	21.1	21.0	20.8	21.1	21.1	21.6	22.0	23.3	21.4	22.6	24.3	24.3	24.8	**25.4**	24.6	23.8	23.5	23.6	23.9	22.5	21.8	542.6	22.6
April	16.5	16.7	16.6	17.3	17.3	16.8	17.6	16.6	15.5	16.7	17.0	16.9	16.5	17.8	17.5	**18.9**	18.5	17.8	16.6	15.4	15.2	14.1	15.3	14.7	399.1	16.6
May	17.0	17.8	17.5	18.3	18.7	17.8	17.7	17.5	17.1	17.3	17.1	17.8	17.8	18.1	19.0	19.1	**20.4**	20.2	19.1	18.2	18.2	17.9	16.8	16.5	431.7	18.0
June....	16.4	17.0	**17.3**	16.3	15.7	15.5	14.8	14.0	12.8	13.5	13.4	13.9	13.7	14.1	14.6	14.8	16.3	15.3	15.4	15.1	15.5	16.3	17.1	16.7	365.6	15.2
July	15.5	15.8	15.4	15.0	14.6	14.8	13.5	13.5	12.5	11.6	11.7	12.2	12.7	13.1	13.7	15.4	**16.5**	16.1	16.0	15.0	15.5	16.0	16.3	15.8	348,2	14.5
August.....	15.5	15.1	15.4	14.3	13.7	13.7	13.9	13.6	12.7	13.3	13.7	14.4	14.6	14.8	15.3	15.6	15.4	15.5	15.5	15.6	16.6	**17.0**	16.1	15.0	356.0	14.8
September. ...	15.0	15.4	14.5	15.0	15.1	15.9	16.8	16.3	16.0	16.2	16.9	17.0	**17.9**	17.9	17.5	17.7	17.0	17.6	17.1	16.7	17.1	17.1	16.7	15.9	395.8	16.5
October.....	19.8	20.4	20.0	19.3	18.1	18.3	18.3	17.8	17.5	17.5	17.8	18.4	18.2	18.8	19.1	19.1	19.0	18.1	18.4	18.3	18.8	18.2	19.3	**20.5**	448.9	18.7
November.....	19.4	21.3	21.7	22.4	22.3	21.5	21.4	21.2	21.0	21.9	23.0	22.8	23.8	**24.2**	23.8	20.6	21.8	20.4	20.6	20.0	19.5	18.5	19.2	19.5	515.2	21.5
December.....	21.6	22.3	21.3	21.5	22.2	22.2	22.5	22.8	23.3	23.4	23.1	22.7	23.1	**24.0**	23.9	22.8	22.1	22.0	22.2	21.6	22.7	23.1	22.1	21.9	540.5	22.5
Annual Sums..	221.8	231.0	228.6	227.9	227.8	227.2	226.1	222.4	217.0	219.2	223.6	224.4	227.9	234.0	234.5	236.1	**238.4**	233.0	231.9	228.1	231.5	230.3	229.4	224.9	5,478.9	228.2
Means	18.5	19.2	19.1	19.0	19.0	18.9	18.8	18.5	18.1	18.3	18.6	18.7	19.0	19.5	19.6	19.7	**19.9**	19.4	19.3	19.0	19.3	19.2	19.1	18.7	456.6	19.0

* Twenty-seven days.

HOURLY VALUES IN INCHES OF MERCURY

[*REDUCED TO 32° FAHRENHEIT*]

OF THE

ATMOSPHERIC PRESSURE,

FOR

EACH DAY, MONTH, AND THE YEAR 1886,

AS DERIVED FROM THE RECORDS OF THE DRAPER BAROGRAPH.

JANUARY.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	12	A. M. 1	2	3	4	5	6	7	8	9	10	11	Date.
1.	28.950	28.951	28.974	28.993	29.018	29.061	29.092	29.131	29.160	29.216	29.251	29.256	29.258	29.268	29.283	29.322	29.345	29.380	29.397	29.427	29.440	29.460	29.475	29.489	1.
2.	29.507	29.517	29.532	29.539	.549	.579	.592	.621	.649	.671	.674	.679	.658	.671	.684	.690	.702	.720	.727	.722	.722	.742	.738	.731	2.
3.	.735	.736	.742	.753	.738	.751	.760	.775	.783	.778	.752	.731	.731	.716	.716	.719	.708	.688	.711	.694	.699	.697	.690	.671	3.
4.	.650	.634	.628	.611	.600	.575	.578	.569	.570	.555	.538	.515	.472	.456	.427	.397	.390	.353	.325	.333	.312	.295	.272	.214	4.
5.	.155	.130	.122	.105	.050	.001	28.983	28.969	28.940	28.993	28.962	28.845	28.870	28.841	28.837	28.836	28.830	28.812	28.805	28.815	28.811	28.805	28.800	28.787	5.
6.	28.791	28.801	28.822	28.820	28.820	28.828	28.829	28.832	28.837	28.839	28.832	28.815	28.788	28.778	28.778	28.774	28.782	28.795	28.789	28.792	28.794	28.794	28.790	28.786	6.
7.	28.812	28.811	28.820	28.817	28.818	28.826	28.835	28.853	28.863	28.895	28.913	28.900	28.900	28.881	28.888	28.907	28.921	28.960	28.972	29.005	29.014	29.040	29.065	29.071	7.
8.	29.085	29.102	29.128	29.147	29.154	29.161	29.169	29.184	29.210	29.248	29.268	29.260	29.210	29.204	29.225	29.226	29.237	29.260	29.255	29.243	29.225	29.191	29.152	29.081	8.
9.	29.007	28.901	28.752	28.672	28.500	28.420	28.410	28.271	28.145	28.156	28.136	28.148	28.125	28.092	28.041	28.015	28.107	28.180	28.230	28.246	28.238	28.218	28.232	28.260	9.
10.	28.266	28.267	28.304	28.328	28.343	28.368	28.396	28.437	28.467	28.510	28.516	28.530	28.534	28.552	28.582	28.612	28.645	28.667	28.723	28.743	28.777	28.795	28.820	28.849	10.
Sums.	290.958	290.850	290.824	290.785	290.590	290.570	290.644	290.642	290.624	**290.861**	290.842	290.679	290.546	290.459	290.461	290.498	290.757	290.815	290.934	291.020	291.032	**291.037**	291.034	290.939	Sums.
11.	28.870	28.891	28.910	28.927	28.941	28.956	28.994	29.028	29.055	29.092	29.127	29.135	29.135	29.135	29.154	29.179	29.195	29.232	29.262	29.290	29.312	29.336	29.351	29.354	11.
12.	29.362	29.359	29.360	29.366	29.393	29.430	29.470	.501	.526	.560	.577	.565	.550	.552	.561	.578	.594	.617	.648	.674	.690	.696	.705	.713	12.
13.	.716	.720	.748	.763	.771	.775	.790	.802	.815	.838	.854	.848	.836	.831	.830	.833	.830	.836	.853	.877	.898	.902	.920	.933	13.
14.	.935	.943	.950	.962	.971	.993	30.005	30.035	30.048	30.084	30.083	30.050	30.040	30.017	30.013	30.009	30.011	30.018	30.022	30.039	30.038	30.031	30.027	30.017	14.
15.	.990	.980	.973	.965	.945	.908	29.895	29.900	29.916	29.923	29.906	29.891	29.858	29.831	29.822	29.831	29.813	29.788	29.762	29.793	29.796	29.780	29.757	29.740	15.
16.	.716	.702	.686	.673	.647	.641	.623	.632	.620	.619	.615	.595	.552	.521	.495	.486	.470	.445	.425	.411	.385	.340	.315	.292	16.
17.	.222	.207	.185	.157	.127	.113	.098	.084	.073	.064	.056	.050	.030	.015	.002	.015	.036	.036	.065	.077	.083	.094	.105	.108	17.
18.	.131	.133	.160	.176	.202	.225	.277	.304	.363	.391	.410	.406	.398	.386	.393	.427	.450	.452	.480	.511	.527	.535	.545	.553	18.
19.	.555	.541	.565	.560	.551	.547	.546	.546	.540	.510	.493	.430	.378	.310	.232	.181	.120	.063	.012	.000	.033	.094	.130	.158	19.
20.	.188	.227	.274	.326	.363	.400	.447	.502	.549	.600	.623	.624	.630	.640	.645	.672	.704	.720	.728	.730	.737	.752	.751	.743	20.
Sums.	294.685	294.703	294.811	294.875	294.911	294.978	295.145	295.334	295.505	295.681	**295.744**	295.594	295.407	295.238	295.146	295.211	295.223	295.207	295.257	295.402	295.499	295.560	295.606	**295.611**	Sums.
21.	29.713	29.678	29.665	29.645	29.630	29.590	29.570	29.552	29.545	29.530	29.523	29.483	29.420	29.345	29.342	29.332	29.332	29.319	29.318	29.310	29.301	29.282	29.267	29.271	21.
22.	.275	.280	.278	.268	.277	.274	.274	.276	.271	.273	.268	.229	.202	.180	.158	.139	.139	.140	.143	.140	.127	.145	.114	.106	22.
23.	.101	.078	.076	.080	.092	.114	.155	.214	.270	.327	.376	.397	.410	.431	.460	.499	.524	.548	.610	.650	.665	.681	.701	.700	23.
24.	.702	.698	.709	.722	.728	.737	.744	.752	.760	.775	.788	.762	.738	.718	.713	.713	.722	.734	.750	.765	.763	.766	.763	.762	24.
25.	.755	.744	.744	.735	.734	.737	.740	.747	.758	.753	.750	.739	.695	.662	.639	.614	.604	.580	.570	.550	.512	.474	.444	.398	25.
26.	.375	.325	.312	.301	.302	.296	.310	.330	.350	.380	.393	.401	.399	.396	.410	.436	.458	.483	.508	.518	.540	.558	.562	.554	26.
27.	.562	.553	.552	.551	.543	.547	.554	.564	.550	.553	.543	.526	.505	.476	.463	.451	.436	.425	.422	.416	.414	.393	.361	.334	27.
28.	.308	.284	.261	.232	.217	.226	.208	.204	.193	.180	.176	.148	.110	.070	.043	.040	.040	.027	.007	.000	28.989	28.965	28.948	28.941	28.
29.	28.920	28.898	28.874	28.860	28.847	28.840	28.818	28.816	28.795	28.792	28.785	28.770	28.742	28.690	28.690	28.674	28.686	28.698	28.695	28.695	28.695	28.700	28.706	28.710	29.
30.	28.716	28.720	28.716	28.712	28.724	28.737	28.747	28.761	28.774	28.786	28.800	28.792	28.771	28.740	28.720	28.704	28.704	28.685	28.670	28.650	28.631	28.610	28.610	28.642	30.
31.	28.653	28.703	28.740	28.788	28.832	28.886	28.918	28.956	28.992	29.026	29.052	29.062	29.050	29.037	29.039	29.047	29.055	29.061	29.075	29.094	29.095	29.092	29.089	29.099	31.
Sums.	322.080	321.961	321.931	321.894	321.926	321.984	322.038	322.172	322.258	322.375	**322.454**	322.309	322.042	321.745	321.677	321.649	321.690	321.700	321.768	**321.788**	321.732	321.666	321.565	321.517	Sums.
Monthly Sums.	907.723	907.514	907.566	907.554	907.427	907.532	907.827	908.148	908.387	908.917	**909.040**	908.582	907.995	907.442	907.284	907.358	907.670	907.722	907.959	908.210	**908.263**	**908.263**	908.205	908.067	Monthly Sums.
Means.	29.281	.274	.276	.276	.272	.275	.285	.295	.303	.320	**.324**	.309	.290	.272	.267	.269	.280	.281	.289	.297	**.299**	**.299**	.297	.293	Means.

FEBRUARY.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	A. M. 12	1	2	3	4	5	6	7	8	9	10	11	P. M.	Date.
1.	29.093	29.092	29.093	29.095	29.095	29.099	29.106	29.134	29.146	29.160	29.163	29.177	29.170	29.161	29.159	29.163	29.172	29.173	29.181	29.200	29.206	29.212	29.213	29.212		1.
2.	.217	.219	.222	.220	.225	.258	.279	.307	.329	.360	.385	.383	.382	.376	.359	.364	.384	.400	.415	.416	.412	.412	.417	.410		2.
3.	.422	.438	.456	.470	.495	.504	.536	.558	.567	.567	.572	.570	.562	.552	.531	.512	.509	.502	.501	.474	.462	.453	.445	.417		3.
4.	.378	.346	.317	.291	.294	.292	.274	.273	.255	.255	.234	.231	.205	.182	.172	.176	.178	.186	.210	.215	.228	.250	.269	.271		4.
5.	.286	.295	.306	.320	.336	.357	.378	.429	.441	.470	.501	.505	.494	.494	.495	.503	.512	.533	.549	.567	.579	.579	.565	.565		5.
6.	.574	.580	.586	.583	.576	.580	.590	.596	.604	.608	.604	.598	.582	.551	.533	.515	.509	.504	.497	.490	.494	.486	.473	.469		7.
7.	.455	.434	.423	.403	.405	.403	.403	.405	.422	.417	.416	.412	.392	.370	.362	.360	.354	.361	.373	.380	.378	.385	.373	.351		6.
8.	.348	.315	.312	.302	.286	.288	.276	.280	.276	.275	.264	.246	.204	.201	.171	.174	.177	.178	.187	.190	.190	.205	.207	.200		8.
9.	.206	.210	.216	.230	.252	.275	.297	.329	.350	.364	.380	.397	.395	.390	.386	.396	.415	.432	.458	.486	.513	.515	.539	.556		9.
10.	.578	.585	.610	.634	.659	.689	.713	.733	.759	.784	.816	.838	.835	.836	.835	.852	.869	.882	.902	.926	.935	.937	.940	.945		10.
Sums.	293.557	293.514	293.541	293.548	293.613	293.745	293.852	294.044	294.149	294.260	294.335	**294.357**	294.221	294.113	294.003	294.015	294.079	294.151	294.273	294.344	294.397	**294.434**	294.411	294.396		Sums.
11.	29.938	29.947	29.952	29.950	29.958	29.949	29.953	29.961	29.966	29.969	29.967	29.955	29.932	29.900	29.884	29.880	29.870	29.870	29.853	29.854	29.820	29.787	29.764	29.748		11.
12.	.735	.707	.680	.648	.610	.574	.573	.542	.533	.513	.501	.490	.433	.409	.379	.365	.340	.318	.308	.292	.258	.223	.219	.193		12.
13.	.167	.112	.085	.040	.031	.002	28.980	28.965	28.954	28.924	28.876	28.858	28.836	28.818	28.797	28.785	28.783	28.784	28.794	28.794	28.793	28.797	28.798	28.808		13.
14.	28.831	28.862	28.897	28.914	28.950	28.988	29.029	29.064	29.091	29.111	29.131	29.147	29.137	29.133	29.131	29.130	29.141	29.143	29.142	29.151	29.153	29.157	29.161	29.165		14.
15.	29.189	29.202	29.223	29.226	29.253	29.273	.286	.326	.357	.359	.334	.317	.286	.257	.211	.171	.164	.138	.088	.037	.014	.030	.031	.048		15.
16.	.085	.139	.168	.200	.231	.271	.303	.331	.349	.359	.357	.363	.355	.340	.340	.344	.356	.379	.442	.482	.520	.531	.543	.566		16.
17.	.573	.573	.592	.604	.618	.641	.657	.665	.675	.680	.672	.668	.646	.605	.576	.541	.517	.496	.494	.493	.476	.468	.447	.417		17.
18.	.406	.388	.376	.355	.350	.353	.351	.356	.371	.379	.385	.383	.365	.342	.362	.366	.381	.405	.418	.433	.446	.465	.472	.473		18.
19.	.472	.461	.450	.428	.419	.405	.383	.385	.382	.362	.341	.303	.240	.199	.136	.116	.086	.012	28.940	28.883	28.811	28.771	28.709	28.675		19.
20.	28.660	28.650	28.645	28.629	28.616	28.613	28.596	28.600	28.603	28.596	28.588	28.573	28.536	28.518	28.522	28.524	28.554	28.588	28.628	28.683	28.729	28.771	28.839	28.888		20.
Sums.	293.056	293.041	293.068	292.994	293.037	293.069	293.111	293.195	**293.281**	293.252	293.151	293.057	292.766	292.521	292.338	292.222	292.192	292.133	292.107	292.102	292.020	292.000	291.983	291.981		Sums.
21.	28.928	28.968	29.004	29.037	29.083	29.115	29.177	29.224	29.241	29.237	29.283	29.226	29.200	29.181	29.171	29.171	29.171	29.170	29.176	29.182	29.186	29.190	29.191	29.194		21.
22.	29.201	29.205	.210	.212	.223	.239	.267	.309	.346	.366	.391	.402	.400	.392	.387	.380	.384	.383	.388	.381	.379	.375	.368	.349		22.
23.	.328	.315	.279	.253	.244	.239	.237	.235	.236	.229	.223	.214	.198	.176	.169	.172	.192	.230	.276	.296	.334	.374	.394	.415		23.
24.	.431	.457	.496	.511	.553	.596	.618	.669	.690	.701	.700	.700	.697	.682	.671	.675	.672	.669	.674	.684	.683	.673	.674	.660		24.
25.	.618	.609	.595	.566	.550	.526	.506	.500	.489	.441	.405	.348	.275	.192	.115	.032	28.931	28.895	28.849	28.791	28.717	28.643	28.596	28.552		25.
26.	28.525	28.452	28.403	28.343	28.304	28.266	28.254	28.244	28.260	28.261	28.277	28.279	28.290	28.300	28.316	28.331	28.330	28.381	28.407	28.446	28.480	28.504	28.538	28.541		26.
27.	28.561	28.570	28.570	28.570	28.553	28.578	28.588	28.615	28.636	28.662	28.660	28.672	28.660	28.680	28.668	28.716	28.708	28.760	28.802	28.854	28.866	28.888	28.888	28.906		27.
28.	28.896	28.903	28.882	28.889	28.878	28.880	28.881	28.857	28.876	28.911	28.909	28.923	28.904	28.886	28.902	28.931	28.935	28.973	28.980	29.012	29.024	29.040	29.043	29.061		28.
Sums.	232.488	232.479	232.439	232.381	232.388	232.439	232.528	232.653	232.774	232.808	**232.848**	232.764	232.624	232.489	332.400	232.413	232.323	232.461	232.552	232.646	232.669	232.687	**232.692**	232.678		Sums.
Monthly Sums.	819.101	819.034	819.048	818.923	819.038	819.253	819.491	819.892	820.204	820.320	**820.334**	820.178	819.611	819.123	818.741	818.650	818.594	818.745	818.932	819.092	819.086	**819.121**	819.116	819.055		Monthly Sums.
Means.	29.254	.251	.252	.247	.251	.259	.267	.280	.293	.297	**.298**	.292	.271	.254	.241	.237	.225	.241	.247	.253	.253	**.254**	.254	.252		Means.

MARCH.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	A. M. 10	11	12	1	2	3	4	5	P. M. 6	7	8	9	10	11	Date.
1.	29.065	29.075	29.096	29.106	29.122	29.145	29.144	29.160	29.140	29.115	29.104	29.064	29.037	29.008	28.956	28.913	28.903	28.878	28.869	28.878	28.872	28.844	28.819	28.808	1.
2.	28.782	28.732	28.730	28.708	28.696	28.706	28.705	28.705	28.715	28.729	28.723	28.117	28.707	28.685	28.685	28.690	28.704	28.713	28.710	28.733	28.737	28.744	28.756	28.753	2.
3.	28.765	28.767	28.768	28.776	28.790	28.812	28.844	28.872	28.885	28.918	28.929	28.952	28.950	28.959	28.968	28.982	28.982	28.992	29.016	29.029	29.045	29.057	29.067	29.074	3.
4.	29.080	29.081	29.078	29.082	29.083	29.093	29.104	29.112	29.116	29.124	29.134	29.135	29.123	29.108	29.094	29.090	29.101	29.116	.124	.134	.139	.154	.157	.153	4.
5.	.150	.149	.143	.145	.147	.155	.155	.132	.135	.122	.114	.109	.103	.075	.055	.051	.046	.056	.066	.073	.080	.090	.093	.090	5.
6.	.090	.087	.085	.084	.078	.085	.090	.098	.094	.085	.087	.074	.057	.047	.025	.026	.049	.062	.080	.093	.102	.147	.162	.170	6.
7.	.178	.183	.187	.186	.191	.197	.222	.242	.240	.239	.244	.236	.217	.200	.200	.200	.203	.214	.217	.231	.233	.239	.235	.233	7.
8.	.133	.234	.231	.225	.222	.216	.212	.225	.218	.213	.201	.188	.177	.152	.131	.118	.110	.106	.110	.111	.103	.095	.080	.061	8.
9.	.041	.033	.013	.005	.002	.001	.000	.010	.023	.038	.054	.072	.078	.083	.108	.120	.137	.147	.170	.196	.205	.212	.215	.228	9.
10.	.228	.231	.238	.241	.239	.247	.260	.283	.280	.283	.284	.287	.277	.244	.230	.220	.210	.205	.202	.204	.205	.216	.216	.213	10.
Sums.	290.612	290.572	290.570	290.558	290.570	290.654	290.736	290.836	290.846	290.866	**290.874**	290.834	290.726	290.561	290.452	290.410	290.445	290.489	290.564	290.685	290.721	290.798	**290.801**	290.783	Sums.
11.	29.212	29.232	29.232	29.236	29.249	29.264	29.282	29.300	29.312	29.307	29.297	29.289	29.275	29.236	29.223	29.209	29.202	29.202	29.202	29.206	29.201	29.192	29.181	29.158	11.
12.	.147	.127	.109	.086	.083	.087	.073	.051	.043	.014	28.974	28.956	28.911	28.866	28.832	28.780	28.758	28.737	28.736	28.738	28.738	28.737	28.747	28.743	12.
13.	28.747	28.747	28.738	28.722	28.709	28.721	28.733	28.735	28.734	28.723	28.715	28.695	28.675	28.630	28.597	28.592	28.578	28.565	28.551	28.554	28.551	28.552	28.454	28.558	13.
14.	28.573	28.608	28.637	28.690	28.746	28.800	28.875	28.937	28.997	29.042	29.080	29.090	29.104	29.128	29.139	29.160	29.190	29.221	29.254	29.280	29.293	29.317	29.336	29.350	14.
15.	29.364	29.379	29.382	29.383	29.389	29.400	29.417	29.433	29.436	.437	.432	.414	.390	.366	.343	.326	.305	.309	.300	.306	.313	.313	.307	.287	15.
16.	.266	.261	.239	.208	.197	.174	.166	.152	.148	.157	.116	.115	.117	.102	.061	.094	.155	.200	.243	.282	.326	.348	.371	.391	16.
17.	.394	.387	.393	.403	.415	.444	.471	.488	.515	.528	.536	.532	.537	.530	.522	.514	.520	.531	.535	.543	.545	.550	.548	.549	17.
18.	.544	.531	.514	.501	.505	.502	.507	.516	.519	.510	.500	.479	.452	.423	.401	.384	.378	.388	.391	.400	.411	.412	.424	.423	18.
19.	.433	.440	.443	.441	.445	.450	.456	.464	.471	.463	.462	.452	.440	.425	.390	.380	.376	.373	.376	.369	.380	.372	.377	.349	19.
20.	.342	.333	.320	.282	.263	.264	.279	.264	.257	.254	.218	.210	.198	.185	.141	.149	.155	.151	.161	.194	.190	.179	.167	.161	20.
Sums.	292.022	**292.045**	292.007	291.952	292.001	292.106	292.259	292.340	292.432	**292.435**	292.330	292.232	292.099	291.891	291.649	291.588	291.617	291.677	291.749	291.872	291.948	291.972	292.012	291.969	Sums.
21.	29.130	29.061	29.038	29.024	28.967	28.900	28.840	28.810	28.753	28.740	28.722	28.706	28.710	28.714	28.715	28.725	28.727	28.740	28.735	28.740	28.734	28.716	28.667	28.627	21.
22.	28.606	28.650	28.603	28.588	28.574	28.584	28.591	28.593	28.600	28.610	28.610	28.612	28.610	28.594	28.590	28.592	28.602	28.607	28.614	28.620	28.636	28.645	28.667	28.681	22.
23.	28.694	28.705	28.702	28.702	28.705	28.710	28.723	28.735	28.747	28.759	28.759	28.756	28.743	28.738	28.730	28.725	28.730	28.750	28.774	28.784	28.814	28.834	28.860	28.875	23.
24.	28.889	28.902	28.907	28.914	28.929	28.954	28.986	29.011	29.028	29.054	29.069	29.082	29.088	29.096	29.112	29.125	29.151	29.182	29.226	29.256	29.300	29.330	29.352	29.371	24.
25.	29.391	29.396	29.410	29.416	29.435	29.431	29.423	.421	.405	.407	.394	.365	.327	.283	.252	.228	.204	.190	.167	.175	.165	.167	.160	.167	25.
26.	.146	.142	.145	.154	.162	.170	.194	.212	.219	.229	.226	.226	.205	.187	.182	.178	.203	.215	.243	.296	.333	.368	.390	.412	26.
27.	.433	.442	.443	.446	.460	.489	.519	.530	.540	.537	.534	.530	.534	.520	.506	.500	.503	.501	.494	.490	.479	.491	.477	.463	27.
28.	.466	.452	.443	.435	.446	.466	.483	.507	.540	.583	.595	.611	.630	.640	.648	.657	.672	.685	.693	.714	.734	.762	.778	.786	28.
29.	.793	.809	.773	.789	.825	.813	.830	.857	.843	.826	.822	.825	.807	.777	.734	.717	.714	.710	.695	.683	.656	.580	.581	.556	29.
30.	.519	.483	.443	.403	.373	.362	.366	.378	.401	.409	.413	.415	.403	.380	.364	.358	.340	.334	.342	.352	.367	.372	.378	.379	30.
31.	.380	.364	.372	.351	.341	.345	.351	.364	.363	.363	.365	.363	.351	.342	.314	.302	.282	.268	.266	.250	.231	.207	.180	.152	31.
Sums.	321.447	321.407	321.279	321.222	321.217	321.224	321.306	321.418	321.439	**321.517**	321.509	321.491	321.408	321.271	321.147	321.107	321.128	321.182	321.249	321.360	321.437	321.472	**321.490**	321.469	Sums.
Monthly Sums.	904.081	904.024	903.855	903.732	903.788	903.984	904.301	904.594	904.717	**904.818**	904.713	904.557	904.235	903.723	903.248	903.107	903.190	903.348	903.562	903.917	904.106	904.242	**304.303**	904.221	Monthly Sums.
Means.	29.164	.162	.157	.153	.155	.161	.171	.180	.185	**.188**	.184	.179	.169	.152	.137	.132	.135	.140	.147	.159	.165	.169	**.171**	.168	Means.

APRIL.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	A. M. 12	1	2	3	4	5	6	7	8	9	10	11	P. M.	Date.
1.	29.105	29.065	29.032	29.000	29.012	29.010	29.043	29.050	29.067	29.100	29.110	29.098	29.096	29.086	29.081	29.088	29.088	29.102	29.110	29.153	29.175	29.185	29.118	29.134		1.
2.	.234	.235	.230	.226	.217	.228	.235	.240	.241	.242	.225	.215	.198	.197	.190	.213	.223	.249	.270	.308	.343	.357	.376	.383		2.
3.	.389	.403	.388	.392	.404	.411	.447	.455	.453	.450	.442	.431	.431	.417	.404	.388	.379	.375	.372	.395	.403	.417	.423	.432		3.
4.	.431	.430	.434	.435	.455	.469	.471	.503	.513	.512	.533	.515	.521	.506	.502	.496	.500	.500	.508	.513	.519	.523	.527	.519		4.
5.	.513	.508	.522	.522	.538	.545	.557	.564	.563	.582	.585	.595	.600	.588	.571	.568	.566	.562	.554	.547	.540	.540	.514	.514		5.
6.	.495	.453	.408	.374	.364	.345	.320	.303	.260	.268	.226	.200	.161	.095	.059	28.980	28.914	28.866	28.860	28.860	28.873	28.877	28.887	28.884		6.
7.	28.900	28.907	28.918	28.926	28.940	28.962	28.980	.000	.012	.040	.061	.068	.073	.094	.105	29.105	29.118	29.115	29.143	29.170	29.192	29.193	29.205	29.210		7.
8.	29.210	29.210	29.210	29.206	29.206	29.225	29.253	.265	.267	.270	.272	.280	.283	.288	.289	.290	.305	.319	.334	.345	.370	.386	.397	.401		8.
9.	.403	.405	.404	.407	.416	.430	.444	.464	.468	.470	.468	.464	.445	.432	412	.401	.400	.414	.426	.429	.444	.452	.452	.445		9.
10.	.442	.434	.429	.425	.420	.425	.428	.430	.430	.424	.417	.400	.380	.368	.360	.348	.360	.400	.425	.473	.530	.560	.580	.605		10.
Sums.	293.122	293.050	292.975	292.913	292.972	293.048	293.178	293.274	293 274	**293 358**	293.339	293.266	293.188	293.071	292.973	292.877	292 853	292.902	293.002	293.193	293.389	293.490	293.479	**293.527**		Sums.
11.	29.621	29.640	29.658	29.680	29.700	29.730	29.774	29.801	29.828	29.860	29.869	29.874	29.872	29.867	29.864	29.862	29.871	29.880	29.889	29.891	29.890	29.887	29.880	29.886		11.
12.	.888	.880	.869	.864	.861	.862	.866	.869	.866	.858	.850	.821	.790	.770	.740	.720	.707	.690	.683	.681	.675	.674	.665	.652		12.
13.	.650	.634	.614	.594	.585	.590	.591	.592	.585	.580	.562	.545	.521	.497	.476	.460	.460	.456	.458	.464	.473	.475	.477	.477		13.
14.	.483	.477	.475	.480	.498	.518	.540	.552	.570	.585	.587	.586	.593	.593	.594	.595	.594	.589	.595	.595	.595	.595	.595	.595		14.
15.	.598	.597	.594	.594	.595	.610	.636	.649	.648	.648	.649	.633	.618	.610	.600	.600	.600	.624	.645	.674	.715	.742	.757	.778		15.
16.	.805	.803	.805	.813	.814	.834	.846	.865	.875	.883	.883	.880	.870	.868	.848	.829	.828	.826	.829	.840	.854	.850	.843	.840		16.
17.	.846	.845	.846	.846	.850	.851	.850	.857	.860	.870	.865	.860	.850	.840	.822	.808	.794	.794	.790	.798	.798	.795	.790	.778		17.
18.	.780	.763	.750	.740	.731	.730	.734	.737	.736	.736	.734	.718	.699	.682	.668	.650	.642	.631	.634	.638	.643	.638	.625	.610		18.
19.	.607	.587	.569	.563	.560	.567	.573	.580	.578	.577	.569	.557	.545	.541	.536	.531	.530	.529	.529	.529	.533	.560	.560	.560		19.
20.	.560	.558	.554	.556	.559	.566	.580	.600	.600	.618	.630	.626	.615	.611	.599	.582	.570	.563	.559	.548	.551	.550	.548	.536		20.
Sums.	**296.838**	296.784	296.734	296 730	296.853	296.858	296.990	297.102	297.146	**297.215**	297.198	297.100	296.973	296.879	296.747	296 637	296.596	296.582	296.611	296.658	296.727	296.766	296.740	296.712		Sums.
21.	29.529	29.521	29.517	29.504	29.493	29.486	29.480	29.480	29.473	29.459	29.436	29.418	29.410	29.393	29.373	29.353	29.347	29.343	29.340	29.348	29.353	29.350	29.346	29.335		21.
22.	.334	.323	.319	.320	.328	.337	.353	.366	.378	.385	.390	.391	.390	.389	.376	.361	.352	.345	.341	.345	.348	.345	.334	.332		22.
23.	.323	.312	.310	.285	.275	.266	.268	.265	.260	.240	.223	.189	.160	.135	.116	.098	.088	.085	.078	.075	.078	.072	.061	.053		23.
24.	.040	.020	.006	.000	.007	.019	.037	.049	.047	.061	.083	.115	.120	.128	.128	.126	.134	.160	.192	.210	.252	.259	.282	.287		24.
25.	.293	.294	.305	.317	.329	.341	.368	.388	.405	.414	.416	.410	.390	.386	.378	.350	.349	.338	.340	.350	.355	.355	.354	.350		25.
26.	.341	.325	.320	.305	.294	.296	.298	.304	.310	.288	.270	.245	.200	.172	.144	.125	.125	.130	.138	.160	.182	.203	.222	.241		26.
27.	.263	.262	.263	.269	.285	.300	.312	.323	.330	.320	.300	.290	.284	.274	.260	.245	.221	.225	.210	.230	.258	.253	.235	.246		27.
28.	.243	.211	.211	.205	.205	.193	.187	.185	.191	.197	.200	.194	.193	.186	.167	.170	.166	.180	.183	.211	.223	.230	.232	.234		28.
29.	.232	.214	.210	.225	.230	.240	.250	.260	.262	.270	.280	.289	.280	.284	.282	.278	.275	.277	.278	.279	.287	.298	.307	.313		29.
30.	.312	.307	.288	.270	.260	.290	.305	.315	.318	.324	.330	.330	.335	.330	.325	.316	.317	.323	.324	.325	.325	.325	.320	.318		30.
Sums.	**292.910**	292.789	292.749	292.700	292.706	292.768	292.858	292.935	292.974	**292.958**	292.928	292.871	292.762	292.677	292.549	292.422	292.374	292.406	292.424	292.533	292.661	292.690	292.693	292.709		Sums.
Monthly Sums.	882.870	882.623	882.458	882.343	882.531	882.674	883.026	883.311	883.394	**883.531**	883.465	883.237	882.923	882.627	882.269	881.936	881.823	881.890	882.037	882.385	882.708	882.946	882.912	**882.948**		Monthly Sums.
Means.	29.429	.421	.415	.411	.418	.422	.434	.444	.446	**.451**	.449	.441	.431	.421	.409	.398	.394	.396	.401	.413	.423	.431	.430	**.432**		Means.

MAY.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	12	A. M. 1	2	3	4	5	6	7	8	9	10	11	Date.
1.	29.314	29.304	29.293	29.286	29.280	29.270	29.293	29.296	29.300	29.303	29.300	29.290	29.274	29.262	29.250	29.237	29.236	29.236	29.247	29.243	29.242	29.248	29.235	29.230	1.
2.	.229	.214	.200	.189	.190	.200	.213	.230	.238	.247	.258	.248	.235	.238	.238	.243	.244	.245	.260	.257	.276	.291	.300	.306	2.
3.	.311	.311	.312	.312	.317	.335	.350	.366	.381	.392	.398	.381	.365	.351	.340	.340	.345	.340	.340	.350	.355	.367	.361	.366	3.
4.	.350	.344	.346	.339	.338	.336	.334	.330	.329	.329	.330	.307	.276	.255	.244	.233	.230	.222	.227	.236	.236	.232	.220	.225	4.
5.	.218	.190	.192	.169	.155	.162	.155	.160	.160	.147	.134	.122	.100	.087	.073	.070	.063	.085	.130	.132	.133	.100	.125	.138	5.
6.	.143	.145	.150	.158	.172	.178	.203	.217	.218	.216	.216	.213	.210	.200	.199	.197	.195	.200	.212	.222	.231	.258	.258	.258	6.
7.	.261	.263	.260	.256	.262	.274	.280	.284	.297	.296	.288	.286	.280	.274	.262	.260	.270	.275	.282	.294	.310	.306	.300	.296	7.
8.	.292	.275	.272	.244	.222	.212	.202	.175	.133	.096	.082	.062	.029	.010	.000	28.988	28.990	28.981	28.990	28.990	28.992	28.992	28.985	28.977	8.
9.	28.962	28.956	28.928	28.903	28.918	28.960	28.974	28.982	28.992	.010	.018	.016	.018	.020	.043	29.057	29.078	29.100	29.134	29.163	29.198	29.226	29.227	29.250	9.
10.	29.283	29.295	29.300	29.313	29.333	29.358	29.388	29.398	29.400	.404	.406	.385	.370	.354	.348	.340	.345	.347	.345	.348	.368	.372	.365	.369	10.
Sums.	292.363	292.297	292.253	292.169	292.187	292.285	292.392	292.438	**292.448**	292.440	292.430	292.310	292.157	292.051	291.997	291.965	291.996	292.031	292.167	292 235	292.341	292.392	292.376	**292.415**	Sums.
11.	29.362	29.338	29.335	29.325	29.326	29.357	29.368	29.355	29.362	29.374	29.353	29.361	29.360	29.350	29.351	29.330	29.329	29.340	29.348	29.345	29.340	29.342	29.350	29.350	11.
12.	.338	.325	.336	.339	.321	.336	.345	.345	.357	.344	.333	.336	.330	.320	.310	.300	.301	.298	.298	.287	.300	.310	.302	.276	12.
13.	.292	.270	.287	.281	.278	.283	.279	.287	.285	.290	.290	.290	.290	.260	.252	.258	.257	.264	.263	.268	.275	.283	.285	.262	13.
14.	.270	.290	.285	.285	.288	.292	.290	.334	.316	.354	.346	.347	.350	.360	.371	.370	.370	.374	.370	.372	.381	.388	.370	.355	14.
15.	.342	.357	.352	.345	.360	.351	.360	.350	.350	.342	.352	.338	.300	.282	.255	.230	.222	.228	.235	.233	.216	.209	.207	.185	15.
16.	.177	.145	.122	.106	.100	.099	.095	.090	.094	.102	.109	.100	.110	.105	.100	.098	.096	.110	.130	.152	.173	.260	.265	.270	16.
17.	.289	.302	.302	.320	.342	.362	.390	.408	.416	.413	.420	.431	.430	.432	.462	.467	.473	.474	.492	.520	.551	.572	.566	.564	17.
18.	.564	.568	.571	.578	.604	.620	.640	.644	.647	.646	.648	.640	.634	.620	.606	.595	.591	.583	.580	.590	.600	.598	.594	.592	18.
19.	.585	.575	.560	.550	.549	.557	.560	.560	.560	.556	.550	.542	.532	.521	.500	.486	.466	.446	.446	.443	.467	.466	.436	.426	19.
20.	.417	.406	.395	.376	.370	.358	.351	.336	.315	.296	.283	.260	.231	.210	.177	.150	.128	.108	.157	.140	.143	.148	.157	.167	20.
Sums.	**293 636**	293.576	293.546	293.505	293.538	293.615	293.678	293.709	293 702	**293.717**	293.684	293.645	293.567	293.460	293.384	293.284	293.233	293.221	293.319	293.349	293.446	293.578	293.532	293.447	Sums.
21.	29.170	29.176	29.178	29.175	29.176	29.181	29.199	29.209	29.217	29.215	29.214	29.212	29.215	29.204	29.207	29.205	29.200	29.201	29.230	29.245	29.266	29.283	29.284	29.278	21.
22.	.278	.278	.271	.258	.254	.250	.232	.223	.230	.206	.192	.190	.174	.160	.143	.128	.122	.112	.118	.120	.120	.123	.118	.110	22.
23.	.110	.104	.092	.084	.096	.103	.106	.106	.104	.102	.100	.094	.085	.075	.071	.070	.070	.068	.076	.093	.102	.118	.133	.134	23.
24.	.124	.113	.108	.105	.095	.091	.093	.081	.090	.083	.077	.071	.060	.044	.031	.030	.030	.030	.025	.011	.015	.010	.003	28.995	24.
25.	28.980	28.964	28.958	28.940	28.928	28.915	28.894	28.891	28.872	28.846	28.839	28.821	28.796	28.794	28.790	28.784	28.791	28.801	28.811	28.831	28.857	28.860	28.863	28.866	25.
26.	28.865	28.863	28.871	28.872	28.877	28.878	28.902	28.901	28.908	28.902	28.910	28.913	28.924	28.955	28.952	28.971	28.992	28.991	28.998	29.020	29 034	29.037	29.036	29.027	26.
27.	29.028	29.026	29.023	29.024	29.027	29.037	29.048	29.056	29.054	29.055	29.047	29.037	29.030	29.020	29.005	28.982	28.961	28.951	28.950	28.941	28.930	28.930	28.932	28.928	27.
28.	28.935	28.940	28.943	28.964	28.987	.012	.028	.046	.060	.073	.091	.098	.089	.087	.087	29.089	29.090	29.096	29.124	29.135	29.165	29.179	29.178	29.184	28.
29.	29.193	29.197	29.198	29.206	29.212	.228	.235	.255	.270	.280	.285	.270	.254	.235	.213	.205	.198	.188	.200	.202	.200	.204	.204	.200	29.
30.	.185	.180	.170	.160	.159	.160	.165	.172	.170	.165	.165	.147	.132	.120	.108	.092	.089	.086	.115	.130	.145	.156	.144	.135	30.
31.	.136	.136	.136	.146	.148	.194	.189	.194	.212	.224	.247	.250	.249	.245	.241	.235	.235	.250	.274	.285	.296	.302	.306	.334	31.
m s.	320.004	319.977	319.948	319.934	319.959	320.049	320.091	320.134	**320.187**	320.151	320.167	320.103	320.108	319.939	319.848	319.791	319.778	319.774	319.921	320.013	320.130	**320.202**	320.201	320.191	Sums.
Monthly Sums.	906.003	905.850	905.747	905.608	905.682	905.949	906.161	906.281	**906.337**	906.308	906.281	906.058	905.832	905.450	905.229	905.040	905.007	905.026	905.407	905.598	905.917	**906.170**	906.109	906.053	Monthly Sums.
Means.	29.226	.221	.218	.213	.215	.224	.231	.235	**.237**	.236	.235	.228	.220	.208	.201	.195	.194	.194	.207	.213	.223	**.231**	.229	.227	Means.

JUNE.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	A. M. 12	1	2	3	4	5	6	7	8	9	10	11	P. M.	Date.
1.	29.334	29.336	29.338	29.343	29.346	29.358	29.382	29.417	29.434	29.448	29.452	29.449	29.438	29.428	29.419	29.415	29.409	29.414	29.427	29.428	29.430	29.440	29.439	29.438		1.
2.	.434	.425	.415	.411	.407	.416	.421	.423	.425	.421	.412	.400	.375	.358	.345	.330	.325	.312	.296	.289	.285	.278	.251	.253		2.
3.	.241	.222	.199	.180	.174	.165	.153	.147	.140	.127	.128	.128	.128	.120	.121	.122	.137	.147	.166	.185	.202	.245	.245	.281		3.
4.	.295	.306	.325	.341	.352	.377	.392	.411	.419	.423	.421	.415	.412	.393	.397	.380	.379	.378	.381	.388	.390	.394	.394	.400		4.
5.	.402	.398	.390	.390	.390	.392	.394	.402	.402	.402	.401	.395	.390	.384	.377	.373	.372	.371	.373	.375	.383	.388	.389	.386		5.
6.	.382	.375	.370	.371	.385	.388	.390	.408	.417	.419	.421	.416	.415	.414	.414	.416	.415	.424	.432	.438	.444	.454	.456	.458		6.
7.	.461	.463	.463	.464	.464	.474	.474	.476	.489	.494	.492	.483	.460	.444	.421	.400	.374	.360	.350	.336	.335	.330	.294	.298		7.
8.	.282	.280	.290	.283	.291	.300	.310	.318	.320	.322	.329	.331	.330	.326	.312	.308	.314	.322	.333	.341	.354	.362	.371	.372		8.
9.	.374	.369	.366	.371	.371	.374	.376	.370	.360	.336	.325	.306	.284	.256	.240	.214	.196	.187	.177	.167	.164	.160	.148	.137		9.
10.	.113	.089	.071	.050	.037	.022	.014	.013	.010	.004	.003	.000	28.995	28.981	28.976	28.971	28.971	28.980	28.992	.010	.044	.041	.042	.045		10.
Sums.	**293.318**	293.263	293.227	293 204	293.217	293.266	293.306	293.385	**293.416**	293.396	293.384	293.323	293.227	293.104	293.022	292.929	292.892	292.895	292.927	292.957	293.031	293.092	293.039	293.068		Sums.
11.	29.056	29.057	29.064	29.074	29.098	29.130	29.132	29.148	29.172	29.185	29.188	29.191	29.190	29.195	29.195	29.195	29.198	29.205	29.222	29.237	29.255	29.285	29.292	29.296		11.
12.	.303	.312	.312	.312	.333	.355	.390	.418	.430	.431	.440	.448	.442	.445	.443	.444	.441	.442	.450	.453	.455	.460	.458	.463		12.
13.	.455	.450	.445	.445	.445	.447	.456	.472	.450	.455	.454	.442	.433	.418	.402	.388	.390	.393	.390	.393	.386	.395	.404	.404		13.
14.	.403	.392	.364	.358	.362	.369	.378	.384	.386	.394	.404	.412	.410	.400	.395	.380	.381	.372	.375	.376	.374	.361	.342	.345		14.
15.	.350	.341	.332	.320	.322	.343	.351	.359	.355	.354	.353	.353	.352	.340	.327	.318	.316	.313	.300	.300	.300	.300	.292	.276		15.
16.	.278	.278	.275	.255	.248	.244	.250	.254	.246	.230	.222	.202	.177	.148	.139	.118	.102	.090	.093	.092	.082	.084	.078	.063		16.
17.	.063	.055	.043	.028	.021	.022	.019	.013	.003	28.974	28.960	28.944	28.923	28.876	28.864	28.828	28.823	28.806	28.788	28.785	28.786	28.792	28.788	28.786		17.
18.	28.797	28.806	28.818	28.823	28.846	28.874	28.917	28.928	28.956	28.976	29.000	29.006	29.050	29.059	29.070	29.088	29.111	29.143	29.172	29.200	29.232	29.262	29.273	29.292		18.
19.	29.303	29.320	29.332	29.346	29.365	29.376	29.407	29.413	29.416	29.419	.427	.433	.433	.429	.428	.435	.436	.429	.431	.430	.431	.443	.443	.451		19.
20.	.453	.463	.464	.475	.488	.498	.506	.516	.521	.518	.521	.524	.520	.505	.502	.504	.511	.513	.520	.525	.531	.546	.554	.558		20.
Sums.	292.461	292.474	292.449	292.436	292.528	292.659	292.806	292.905	292.935	292.936	**292.969**	292.955	292.930	292.815	292.765	292.698	292.709	292.706	292.741	292.791	292.832	292.928	292.924	**292.934**		Sums.
21.	29.567	29.568	29.566	29.567	29.568	29.570	29.580	29.594	29.601	29.602	29.604	29.602	29.596	29.582	29.564	29.551	29.547	29.542	29.541	29.543	29.546	29.553	29.543	29.534		21.
22.	.530	.520	.502	.489	.493	.496	.493	.490	.480	.472	.456	.442	.423	.411	.402	.385	.381	.375	.376	.363	.358	.370	.370	.352		22.
23.	.342	.336	.315	.307	.305	.304	.300	.292	.290	.290	.287	.283	.285	.278	.267	.256	.250	.256	.258	.255	.259	.263	.260	.252		23.
24.	.248	.242	.240	.240	.241	.248	.260	.263	.268	.268	.268	.270	.266	.267	.265	.262	.264	.265	.264	.265	.265	.264	.259	.260		24.
25.	.251	.250	.248	.237	.230	.225	.233	.235	.233	.232	.227	.220	.205	.193	.174	.163	.153	.140	.157	.161	.165	.171	.156	.141		25.
26.	.114	.106	.096	.078	.064	.088	.073	.072	.070	.061	.051	.041	.010	28.998	28.984	28.974	28.976	28.980	28.996	.000	.005	.005	.005	.004		26.
27.	.007	28.995	28.994	28.990	.001	.021	.032	.041	.042	.048	.048	.058	.060	29.074	29.083	29.105	29.124	29.136	29.163	.180	.211	.221	.228	.240		27.
28.	.242	29.251	29.256	29.264	.264	.274	.280	.291	.299	.307	.310	.325	.326	.320	.320	.314	.311	.310	.332	.334	.334	.341	.342	.331		28.
29.	.328	.330	.318	.304	.306	.303	.306	.303	.292	.256	.233	.208	.178	.148	.125	.113	.116	.112	.121	.135	.149	.188	.230	.260		29.
30.	281	.303	.315	.343	.353	.376	.376	.410	.409	.417	.428	.436	.440	.436	.433	.431	.429	.429	.434	.441	.452	.463	.478	.495		30.
Sums.	292.910	292.901	292.850	292.819	292.825	292.905	292.933	**292.991**	292.985	292.953	292.912	292 885	292.789	292.707	292 617	292.554	292.551	292.545	292.642	292 677	292.744	292.839	**292.871**	292.869		Sums.
Monthly Sums.	878.689	878.638	878.526	878.459	878.570	878.830	879.045	879.281	**879 336**	879.285	879.265	879.163	878 946	878.626	878.404	878.181	878.152	878.146	878.310	878.425	878.607	878.859	878.834	**878.871**		Monthly Sums.
Means.	29.290	.288	.284	.282	.286	.294	.301	.309	**.311**	.309	.308	.305	.298	.287	.280	.273	.272	.271	.274	.281	.287	.295	.294	**.296**		Means.

JULY.

Date.	P. M. 12	A. M. 1	2	3	4	5	6	7	8	9	10	11	12	P. M. 1	2	3	4	5	6	7	8	9	10	11	Date.
1.	29.494	29.496	29.498	29.498	29.510	29.530	29.544	29.553	29.555	29.553	29.545	29.544	29.538	29.528	29.518	29.507	29.494	29.487	29.490	29.488	29.491	29.492	29.488	29.487	1.
2.	.487	.490	.485	.479	.475	.477	.480	.481	.475	.465	.469	.464	.425	.424	.402	.400	.371	.368	.362	.359	.359	.358	.354	.349	2.
3.	.342	.328	.317	.317	.320	.319	.320	.334	.341	.343	.352	.353	.351	.347	.344	.337	.321	.331	.340	.347	.359	.369	.373	.376	3.
4.	.387	.390	.391	.396	.426	.440	.451	.464	.466	.466	.472	.474	.466	.462	.451	.441	.441	.437	.441	.448	.454	.466	.475	.477	4.
5.	.481	.482	.476	.476	.477	.477	.494	.500	.503	.503	.504	.508	.504	.491	.480	.475	.461	.452	.448	.443	.465	.470	.461	.454	5.
6.	.452	.437	.439	.437	.438	.437	.437	.435	.423	.421	.413	.400	.374	.363	.346	.334	.323	.316	.316	.305	.271	.262	.260	.255	6.
7.	.248	.234	.220	.199	.192	.177	.172	.171	.153	.138	.125	.113	.100	.092	.074	.070	.058	.070	.080	.092	.107	.116	.118	.138	7.
8.	.162	.163	.169	.175	.185	.217	.240	.264	.280	.285	.288	.286	.286	.279	.274	.273	.280	.285	.300	.323	.345	.356	.362	.377	8.
9.	.374	.373	.373	.381	.385	.400	.404	.406	.414	.421	.421	.420	.408	.398	.396	.381	.374	.370	.361	.358	.347	.346	.346	.338	9.
10.	.328	.313	.294	.281	.280	.272	.264	.276	.270	.234	.224	.203	.205	.187	.188	.187	.180	.173	.166	.162	.167	.179	.176	.174	10.
Sums.	**293.755**	293.706	293.662	293.539	293 688	293.746	293.806	**293.884**	293.880	293.829	293.813	293.765	293.657	293.571	293.473	293.405	293.304	293.289	293.304	293.325	293.365	293.414	293.413	293.425	Sums.
11.	29.168	29.161	29.152	29.146	29.141	29.149	29.134	29.130	29.125	29.118	29.116	29.117	29.114	29.107	29 100	29.093	29.089	29.089	29.091	29 094	29.118	29.138	29.158	29.175	11.
12.	.184	.191	.200	.198	.205	.214	.228	.242	.248	.258	.245	.234	.226	.214	.207	.202	.198	.198	.212	.228	.246	.263	.271	.271	12.
13.	.273	.275	.276	.280	.290	.298	.313	.332	.349	.350	.345	.337	.329	.314	.311	.304	.296	.317	.331	.348	.352	.368	.378	.378	13.
14.	.387	.381	.378	.381	.378	.368	.371	.403	.393	.391	.388	.397	.396	.390	.380	.362	.353	.359	.355	.355	.365	.364	.351	.345	14.
15.	.347	.313	.277	.262	.261	.263	.253	.265	.277	.276	.276	.262	.250	.240	.235	.241	.245	.240	.243	.250	.261	.275	.278	.284	15.
16.	.291	.290	.282	.271	.269	.259	.267	.267	.253	.249	.260	.261	.242	.244	.246	.242	.241	.236	.236	.237	.239	.256	.255	.256	16.
17.	.258	.250	.241	.238	.232	.240	.243	.246	.251	.246	.249	.247	.246	.230	.225	.222	.224	.228	.239	.248	.265	.279	.284	.286	17.
18.	.286	.285	.280	.279	.280	.284	.291	.290	.290	.290	.289	.284	.260	.228	.228	.223	222	.221	.214	.218	.208	.206	.190	.189	18.
19.	.176	.162	.161	.148	.149	.139	.146	.149	.136	.126	.130	.115	.104	.088	.070	.060	.050	.047	.053	.063	.072	.082	.080	.076	19.
20.	077	.068	.080	.076	.080	.080	.080	.080	.072	.072	.066	.063	052	.040	.033	.020	.020	.021	.068	.071	.074	.080	.080	.101	20.
Sums.	**292.447**	292.376	292.327	292.279	292.285	292.294	292.326	**292.404**	292.394	292.376	292.364	292.317	292.219	292.095	292.035	291.969	291.938	291.956	292.042	292.112	292.200	292.311	292.325	292.361	Sums.
21.	29.102	29.100	29.108	29.115	29.128	29.135	29.142	29.155	29.158	29.154	29.175	29.161	29.156	29.147	29.140	29.132	29.131	29.133	29.132	29.125	29.129	29.126	29.124	29.119	21.
22.	.122	.114	.105	.097	.095	.104	.107	.118	.127	.127	.140	.143	.146	.146	.146	.148	.151	.153	.174	.200	.226	.251	.260	.271	22.
23.	.281	.281	.282	.291	.316	.331	.342	.364	.382	.381	.377	.368	.366	.363	.349	.340	.340	.346	.356	.376	.388	.396	.398	.403	23.
24.	.413	.411	.413	.414	.426	.435	.445	.446	.439	.430	.420	.409	.407	.388	.385	.380	.377	.372	.377	.382	.387	.391	.388	.387	24.
25.	.386	.386	.385	.381	.380	.378	.380	.379	.377	.366	.353	.348	.339	.338	.329	.314	.314	.315	.313	.312	.306	.295	.289	.292	25.
26.	.270	.264	.239	.226	.225	.225	.229	.238	.230	.230	.225	.217	.216	.210	.202	.199	.181	.172	.177	.180	.193	.190	.176	.166	26.
27.	.152	.148	.133	.113	.106	.106	.106	.106	.103	.094	.081	.065	.050	.050	.047	.041	.040	.040	.042	.044	.050	.060	.061	.066	27.
28.	.069	.069	.070	.083	.086	.096	.118	.129	.136	.141	.142	.139	.136	.131	.128	.126	.123	.125	.138	.142	.165	.176	.182	.188	28.
29.	.188	.178	.181	.187	.187	.191	.199	.213	.218	.212	.210	.206	.194	.192	.185	.180	.182	.172	.174	.164	.176	.181	.181	.176	29.
30.	.176	.182	.180	.185	.178	.184	.188	.183	.196	.209	.235	.222	.219	.219	.217	.203	.198	.196	.196	.203	.202	.221	.230	.231	30.
31.	.240	.236	.230	.227	.231	.226	.249	.265	.292	.292	.289	.288	.289	.293	.282	.271	.264	.261	.268	.274	.283	.286	.285	.285	31.
Sums.	321.499	321.369	321.326	321.319	321.358	321.411	321.505	321.596	**321.658**	321.636	321.646	321.566	321.518	321.477	321.410	321.334	321.301	321.285	321.347	321.402	321.505	321.573	321 574	**321.584**	Sums.
Monthly Sums.	**907.701**	907.451	907.315	907.137	907.331	907.451	907.637	907.884	**907.932**	907.841	907.825	907.648	907.394	907.143	906.918	906.708	906.543	906.530	906.693	906.839	907 070	907.295	907.312	907.370	Monthly Sums.
Means.	**29.281**	.272	.268	.262	.269	.273	.279	.287	**.288**	.285	.285	.279	.271	.263	.255	.249	.244	.243	.248	.253	.260	.267	.268	.270	Means.

AUGUST.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	A. M. 12	1	2	3	4	5	6	7	8	9	10	11	P. M.	Date.
1.	29.287	29.282	29.276	29.275	29.271	29.271	29.271	29.271	29.271	29.274	29.266	29.247	29.234	29.214	29.205	29.182	29.162	29.151	29.142	29.145	29.126	29.126	29.101	29.065		1.
2.	.046	.005	28.968	28.932	28.912	28.914	28.896	28.885	28.886	28.867	28.865	28.865	28.850	28.830	28.828	28.831	28.840	28.851	28.868	28.875	28.886	28.906	28.906	28.909		2.
3.	28.914	28.910	28.910	28.909	28.927	28.940	28.960	28.973	28.963	28.964	28.967	28.967	28.966	28.951	28.964	28.967	29.002	29.027	29.044	29.065	29.096	29.109	29.114	29.114		3.
4.	29.125	29.125	29.137	29.146	29.161	29.175	29.195	29.214	29.228	29.241	29.244	29.248	29.250	29.251	29.242	29.251	.256	.267	.274	.290	.306	.308	.307	.308		4.
5.	.313	.313	.306	.308	.314	.331	.342	.358	.363	.370	.369	.361	.348	.346	.340	.338	.337	.338	.342	.345	.355	.360	.360	.362		5.
6.	.362	.362	.352	.342	.340	.347	.354	.360	.358	.360	.358	.351	.348	.343	.337	.336	.336	.339	.342	.343	.352	.365	.364	.363		6.
7.	.363	.363	.357	.361	.362	.368	.370	.373	.378	.383	.387	.383	.381	.370	.361	.348	.333	.327	.327	.326	.321	.304	.301	.278		7.
8.	.266	.266	.222	.244	.296	.300	.311	.338	.370	.399	.417	.425	.430	.440	.439	.440	.453	.455	.461	.482	.508	.522	.532	.546		8.
9.	.556	.556	.564	.567	.576	.587	.612	.623	.627	.638	.635	.626	.615	.604	.595	.588	.586	.586	.595	.598	.612	.621	.617	.607		9.
10.	.603	.603	.589	.576	.571	.572	.567	.573	.574	.562	.542	.517	.497	.470	.450	.432	.408	.390	.383	.380	.377	.370	.360	.349		10.
Sums.	292.721	292.785	292.681	292.660	292.730	292.805	292.878	292.968	293.018	**293.058**	293.050	292.990	292.919	292.819	292.761	292.713	292.713	292.731	292.778	292.849	292.939	**292.990**	292.962	292.901		Sums.
11.	29.325	29.307	29.287	29.265	29.251	29.243	29.237	29.227	29.219	29.211	29.202	29.190	29.171	29.157	29.140	29.113	29.091	29.076	29.080	29.075	29.078	29.074	29.067	29.058		11.
12.	.046	.041	.028	.010	.013	.037	.050	.067	.063	.102	.102	.102	.101	.100	.098	.100	.099	.127	.148	.175	.207	.227	.232	.255		12.
13.	.255	.261	.266	.270	.288	.300	.314	.339	.341	.352	.331	.309	.296	.291	.281	.268	.261	.247	.242	.236	.241	.227	.213	.198		13.
14.	.176	.152	.136	.121	.101	.085	.072	.061	.050	.046	.025	.006	28.988	28.970	28.968	28.965	28.964	28.976	.004	.033	.057	.081	.105	.121		14.
15.	.135	.155	.176	.188	.192	.232	.251	.268	.281	.300	.308	.298	29.300	29.300	29.301	29.301	29.300	29.300	.302	.312	.348	.358	.359	.379		15.
16.	.386	.391	.382	.386	.387	.409	.412	.422	.415	.416	.416	.400	.380	.361	.333	.310	.278	.262	.262	.193	.150	.100	.052	28.952		16.
17.	28.965	28.956	28.941	28.934	28.949	28.995	.023	.056	.096	.115	.139	.162	.178	.198	.215	.220	.238	.255	.268	.285	.305	.309	.333	29.345		17.
18.	29.352	29.370	29.378	29.380	29.384	29.401	.412	.436	.446	.464	.481	.476	.464	.463	.463	.463	.458	.457	.459	.463	.484	.494	.496	.497		18.
19.	.500	.502	.504	.513	.512	.520	.532	.537	.540	.542	.543	.541	.545	.545	.545	.550	.555	.564	.579	.588	.605	.614	.624	.624		19.
20.	.627	.627	.630	.630	.631	.649	.662	.683	.689	.694	.700	.694	.686	.674	.663	.651	.645	.643	.634	.640	.645	.646	.647	.644		20.
Sums.	292.767	292.762	292.728	292.697	292.708	292.871	292.965	293.096	293.140	293.242	**293.247**	293.178	293.109	293.059	293.007	292.941	292.889	292.907	292.978	293.000	293.120	**293.130**	293.128	293.073		Sums.
21.	29.644	29.640	29.634	29.635	29.633	29.634	29.637	29.640	29.644	29.644	29.640	29.630	29.610	29.589	29.569	29.561	29.550	29.545	29.546	29.542	29.546	29.528	29.517	29.500		21.
22.	.483	.466	.461	.455	.450	.440	.425	.423	.420	.407	.401	.372	.350	.337	.320	.308	.286	.275	.266	.256	.251	.232	.226	.200		22.
23.	.218	.210	.206	.203	.205	.210	.221	.236	.240	.248	.248	.246	.243	.241	.242	.242	.242	.243	.249	.261	.274	.273	.269	.269		23.
24.	.270	.270	.263	.257	.257	.262	.283	.297	.314	.322	.321	.326	.327	.319	.317	.312	.315	.321	.330	.338	.340	.338	.351	.352		24.
25.	.350	.345	.343	.340	.336	.340	.340	.350	.355	.360	.372	.370	.369	.362	.352	.349	.354	.348	.342	.344	.362	.356	.354	.351		25.
26.	.341	.340	.345	.350	.350	.343	.346	.352	.350	.330	.309	.291	.271	.266	.235	.221	.212	.211	.210	.215	.227	.229	.232	.235		26.
27.	.239	.236	.237	.238	.240	.249	.260	.273	.285	.286	.285	.283	.274	.268	.261	.247	.244	.238	.235	.239	.241	.244	.240	.238		27.
28.	.236	.230	.230	.229	.226	.226	.230	.230	.232	.233	.231	.232	.222	.214	.204	.190	.188	.186	.183	.188	.204	.204	.206	.208		28.
29.	.206	.202	.200	.189	.189	.194	.202	.214	.225	.237	.249	.251	.254	.254	.252	.246	.250	.253	.258	.263	.265	.285	.288	.304		29.
30.	.302	.298	.292	.281	.277	.274	.293	.299	.293	.287	.277	.270	.252	.232	.212	.187	.170	.167	.163	.165	.165	.155	.135	.119		30.
31.	.104	.088	.073	.068	.068	.067	.066	.068	.073	.073	.070	.046	.030	.029	.034	.042	.062	.084	.074	.101	.123	.137	.153	.172		31.
Sums.	**322.393**	322.325	322.284	322.245	322.231	322.239	322.303	322.382	**322.431**	322.427	322.403	322.317	322.202	322.111	321.998	321.905	321.873	321.866	321.856	321.912	322.000	321.981	321.970	321.948		Sums.
Monthly Sums.	907.881	907.872	907.693	907.602	907.669	907.915	908.146	908.446	908.589	**908.725**	908.700	908.485	908.230	907.989	907.766	907.559	907.475	907.504	907.612	907.734	908.035	**908.065**	908.061	907.922		Monthly Sums.
Means.	29.286	.286	.281	.277	.279	.287	.295	.305	.309	**.314**	.313	.306	.298	.290	.283	.276	.273	.274	.278	.282	.291	**.292**	.292	.288		Means.

SEPTEMBER.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	A. M. 12	1	2	3	4	5	6	7	8	9	10	11	P. M. Date.
1.	29.190	29.200	29.217	29.233	29.242	29.284	29.312	29.340	29.360	29.382	29.396	29.403	29.410	29.424	29.432	29.452	29.470	29.491	29.523	29.558	29.590	29.610	29.623	29.636	1.
2.	.657	.674	.689	.702	.708	.725	.742	.748	.764	.769	.770	.766	.758	.749	.741	.735	.730	.723	.722	.724	.728	.731	.730	.730	2.
3.	.726	.721	.718	.721	.721	.726	.742	.751	.766	.780	.786	.783	.782	.785	.785	.780	.780	.778	.778	.782	.785	.788	.787	.790	3.
4.	.788	.776	.773	.766	.758	.767	.780	.787	.785	.788	.790	.785	.771	.762	.750	.727	.733	.734	.732	.728	.735	.736	.732	.728	4.
5.	.716	.715	.712	.704	.703	.713	.725	.722	.722	.726	.723	.720	.714	.710	.693	.686	.680	.677	.676	.682	.688	.691	.685	.682	5.
6.	.680	.672	.670	.666	.676	.690	.710	.721	.732	.732	.731	.716	.712	.697	.691	.688	.689	.695	.695	.698	.702	.702	.702	.696	6.
7.	.697	.680	.674	.670	.668	.687	.707	.718	.721	.720	.705	.681	.665	.646	.631	.628	.623	.623	.620	.626	.626	.625	.616	.606	7.
8.	.600	.580	.576	.568	.573	.585	.590	.588	.582	.572	.557	.543	.522	.502	.486	.473	.463	.458	.446	.442	.442	.439	.436	.436	8.
9.	.435	.427	.420	.409	.403	.410	.418	.416	.416	.416	.400	.380	.366	.356	.339	.329	.323	.330	.334	.331	.321	.330	.326	.318	9.
10.	.314	.310	.293	.269	.261	.250	.256	.250	.253	.258	.257	.246	.231	.222	.212	.197	.184	.178	.174	.182	.183	.184	.173	.163	10.
Sums.	295.803	295.755	295.742	295.708	295.713	295.837	295.982	296.041	296.101	**296.143**	296.115	296.023	295.931	295.854	295.760	295.695	295.675	295.687	295.700	295.753	295.800	**295.836**	295.811	295.785	Sums.
11.	29.158	29.148	29.130	29.126	29.124	29.124	29.136	29.147	29.158	29.166	29.177	29.175	29.176	29.172	29.163	29.176	29.195	29.208	29.227	29.241	29.260	29.278	29.288	29.298	11.
12.	.298	.294	.292	.283	.281	.280	.278	.272	.271	.258	.226	.209	.178	.145	.121	.106	.070	.042	.020	.005	28.990	28.975	28.984	.010	12.
13.	.028	.028	.038	.042	.057	.081	.113	.132	.153	.160	.165	.172	.168	.165	.166	.178	.209	.236	.250	.294	29.320	29.337	29.352	.349	13.
14.	.370	.380	.380	.370	.368	.366	.372	.376	.388	.387	.398	.375	.368	.345	.343	.345	.355	.364	.363	.375	.380	.382	.392	.400	14.
15.	.418	.427	.426	.440	.455	.473	.506	.518	.535	.558	.570	.583	.589	.592	.591	.594	.597	.607	.617	.627	.643	.655	.665	.656	15.
16.	.660	.652	.648	.645	.645	.643	.652	.657	.658	.648	.639	.631	.614	.598	.576	.576	.554	.544	.525	.523	.506	.491	.490	.490	16.
17.	.488	.487	.468	.453	.450	.443	.442	.447	.453	.452	.434	.414	.398	.385	.360	.360	.352	.343	.369	.374	.387	.388	.410	.381	17.
18.	.386	.401	.404	.420	.446	.481	.519	.538	.575	.594	.600	.606	.608	.607	.603	.608	.624	.649	.646	.662	.674	.682	.679	.679	18.
19.	.680	.685	.682	.676	.674	.665	.664	.655	.631	.614	.601	.580	.527	.501	.430	.368	.362	.291	.265	.250	.222	.201	.153	.106	19.
20.	.110	.110	.150	.155	.161	.166	.183	.186	.196	.200	.202	.197	.196	.192	.186	.218	.240	.272	.312	.352	.373	.381	.387	.388	20.
Sums.	293.596	293.612	293.618	293.610	293.661	293.722	293.865	293.928	294.018	**294.037**	294.012	293.942	293.822	293.702	293.539	293.529	293.558	293.556	293.594	293.703	293.755	293.770	**293.800**	293.757	Sums.
21.	29.390	29.397	29.395	29.395	29.397	29.406	29.416	29.418	29.425	29.412	29.383	29.375	29.364	29.354	29.338	29.332	29.336	29.348	29.366	29.387	29.404	29.420	29.462	29.481	21.
22.	.494	.522	.520	.524	.534	.551	.575	.591	.596	.596	.595	.586	.576	.568	.559	.552	.532	.530	.531	.536	.538	.538	.536	.536	22.
23.	.545	.535	.518	.505	.482	.468	.474	.479	.475	.474	.458	.431	.396	.378	.375	.365	.362	.397	.420	.440	.448	.467	.487	.484	23.
24.	.501	.497	.498	.500	.500	.510	.535	.547	.557	.565	.544	.534	.524	.498	.481	.470	.470	.469	.472	.475	.482	.487	.494	.504	24.
25.	.516	.530	.530	.541	.564	.593	.617	.639	.660	.670	.685	.663	.651	.629	.626	.622	.613	.608	.594	.587	.585	.580	.566	.558	25.
26.	.532	.509	.471	.445	.419	.402	.401	.392	.383	.375	.354	.325	.302	.266	.243	.220	.178	.174	.162	.157	.150	.141	.141	.135	26.
27.	.132	.134	.128	.137	.145	.167	.185	.194	.203	.216	.224	.216	.216	.218	.222	.240	.255	.278	.307	.336	.351	.372	.376	.370	27.
28.	.360	.361	.352	.348	.330	.318	.316	.318	.316	.310	.300	.283	.262	.232	.215	.211	.212	.208	.200	.196	.189	.177	.149	.132	28.
29.	.120	.103	.075	.082	.090	.109	.136	.166	.180	.210	.230	.237	.250	.245	.251	.263	.273	.283	.298	.311	.326	.341	.347	.350	29.
30.	.354	.354	.352	.354	.353	.351	.357	.357	.356	.354	.335	.322	.300	.272	.245	.217	.210	.190	.173	.149	.142	.128	.113	.098	30.
Sums.	**293.944**	293.942	293.839	293.823	293.814	293.875	294.012	294.101	294.151	**294.182**	294.108	293.972	293.843	293.660	293.655	293.492	293.441	293.485	293.523	293.574	293.615	293.651	293.671	293.648	Sums.
Monthly Sums.	**883.343**	883.309	883.199	883.141	883.188	883.434	883.859	884.070	884.270	**884.362**	884.235	883.937	883.596	883.216	882.954	882.716	882.674	882.728	882.817	883.030	883.170	883.257	883.282	883.190	Monthly Sums.
Means.	**29.445**	.444	.440	.438	.439	.448	.462	.469	.476	**.479**	.474	.465	.453	.440	.432	.424	.422	.424	.427	.434	.439	.442	.443	.440	Means.

OCTOBER.

Date.	P. M. 12	A. M. 1	2	3	4	5	6	7	8	9	10	11	12	P. M. 1	2	3	4	5	6	7	8	9	10	11	Date.
1.	29.091	29.070	29.063	29.040	29.046	29.046	29.045	29.046	29.046	29.049	29.047	29.044	29.036	29.036	29.036	29.063	29.100	29.120	29.150	29.187	29.222	29.255	29.290	29.306	1.
2.	.343	.360	.373	.384	.413	.441	.452	.472	.490	.496	.495	.495	.492	.497	.506	.513	.518	.536	.573	.599	.612	.650	.670	.673	2.
3.	.683	.705	.703	.703	.721	.734	.746	.759	.764	.771	.758	.746	.715	.693	.671	.652	.639	.627	.626	.619	.611	.600	.588	.567	3.
4.	.559	.546	.523	.515	.502	.491	.480	.471	.466	.460	.442	.415	.379	.360	.342	.322	.314	.322	.332	.341	.340	.340	.338	.333	4.
5.	.333	.340	.338	.342	.362	.371	.393	.440	.464	.480	.484	.492	.491	.489	.483	.483	.483	.488	.496	.499	.500	.502	.504	.510	5.
6.	.500	.490	.490	.478	.467	.461	.468	.472	.480	.478	.463	.452	.432	.405	.386	.383	.386	.382	.384	.390	.399	.408	.408	.411	6.
7.	.419	.429	.429	.427	.430	.445	.469	.485	.506	.537	.560	.560	.561	.553	.557	.559	.562	.569	.571	.581	.591	.591	.599	.598	7.
8.	.586	.585	.584	.580	.587	.588	.590	.596	.604	.609	.600	.583	.562	.542	.528	.514	.506	.503	.509	.510	.510	.502	.500	.478	8.
9.	.474	.468	.463	.458	.462	.470	.472	.477	.485	.484	.481	.477	.449	.425	.416	.413	.417	.417	.428	.430	.435	.443	.455	.461	9.
10.	.473	.483	.484	.487	.494	.508	.523	.540	.555	.561	.570	.562	.555	.545	.546	.546	.546	.548	.529	.549	.551	.558	.566	.567	10.
Sums.	294.461	294.476	294.450	294.414	294.484	294.555	294.638	294.758	294.860	**294.925**	294.900	294.826	294.672	294.545	294.469	294.448	294.471	294.512	294.618	294.705	294.771	294.849	**294.918**	294.904	Sums.
11.	29.573	29.579	29.573	29.569	29.564	29.566	29.569	29.580	29.582	29.582	29.579	29.548	29.538	29.518	29.496	29.494	29.476	29.479	29.476	29.471	29.468	29.468	29.455	29.443	11.
12.	.428	.414	.390	.378	.371	.367	.358	.360	.345	.339	.320	.396	.268	.244	.223	.204	.200	.200	.198	.198	.214	.206	.197	.196	12.
13.	.201	.216	.247	.286	.308	.330	.350	.374	.405	.425	.441	.441	.442	.442	.454	.461	.460	.466	.481	.493	.497	.507	.512	.521	13.
14.	.523	.530	.524	.528	.523	.516	.512	.522	.524	.520	.518	.488	.448	.418	.400	.390	.381	.343	.327	.323	.295	.268	.245	.195	14.
15.	.175	.126	.099	.085	.074	.060	.056	.060	.060	.060	.056	.040	.027	.021	.017	.019	.025	.045	.080	.091	.098	.108	.121	.137	15.
16.	.172	.193	.203	.210	.247	.270	.307	.347	.362	.366	.393	.408	.410	.433	.458	.467	.492	.526	.567	.593	.620	.641	.656	.667	16.
17.	.674	.697	.693	.710	.736	.738	.757	.765	.766	.758	.753	.718	.696	.675	.662	.648	.608	.613	.611	.586	.570	.600	.573	.556	17.
18.	.550	.533	.510	.504	.518	.519	.537	.562	.590	.593	.618	.622	.635	.632	.638	.658	.661	.687	.718	.740	.756	.761	.762	.778	18.
19.	.786	.796	.803	.805	.829	.851	.870	.893	.901	.904	.879	.901	.890	.878	.867	.860	.857	.850	.855	.844	.847	.857	.848	.825	19.
20.	.820	.817	.810	.790	.790	.790	.787	.782	.782	.785	.779	.751	.717	.693	.664	.647	.632	.628	.623	.613	.592	.567	.546	.511	20.
Sums.	294.902	294.901	294.852	294.865	294.960	295.007	295.103	295.245	295.317	295.332	**295.336**	295.314	295.071	294.954	294.879	294.848	294.792	294.837	294.936	294.952	294.957	**294.983**	294.915	294.829	Sums.
21.	29.485	29.455	29.427	29.410	29.382	29.356	29.336	29.322	29.301	29.271	29.270	29.259	29.232	29.222	29.220	29.244	29.265	29.311	29.351	29.373	29.385	29.401	29.406	29.412	21.
22.	.418	.429	.434	.433	.443	.456	.459	.461	.465	.448	.424	.388	.352	.318	.289	.270	.267	.273	.281	.278	.283	.282	.275	.262	22.
23.	.262	.267	.272	.284	.305	.336	.360	.400	.428	.443	.458	.473	.472	.473	.483	.496	.500	.527	.563	.595	.616	.635	.643	.647	23.
24.	.656	.668	.676	.682	.696	.713	.726	.746	.758	.764	.774	.774	.765	.750	.749	.748	.739	.733	.736	.738	.735	.722	.705	.691	24.
25.	.684	.666	.652	.631	.618	.601	.588	.595	.590	.578	.564	.544	.529	.507	.500	.494	.491	.510	.524	.524	.524	.530	.531	.531	25.
26.	.540	.545	.550	.555	.573	.589	.618	.636	.658	.679	.705	.704	.711	.715	.728	.738	.755	.763	.755	.753	.760	.764	.756	.748	26.
27.	.740	.711	.701	.681	.693	.681	.665	.664	.662	.647	.622	.602	.570	.542	.524	.495	.458	.462	.449	.425	.405	.390	.364	.342	27.
28.	.335	.318	.306	.295	.287	.274	.270	.278	.275	.275	.261	.259	.250	.236	.230	.230	.238	.248	.250	.250	.262	.262	.262	.253	28.
29.	.260	.259	.256	.261	.260	.264	.263	.265	.270	.272	.278	.290	.287	.282	.282	.292	.295	.296	.300	.300	.301	.311	.294	.300	29.
30.	.305	.313	.304	.307	.306	.310	.311	.320	.306	.328	.348	.334	.321	.292	.278	.258	.246	.228	.219	.160	.151	.140	.124	.086	30.
31.	.070	.050	.030	.055	.076	.102	.127	.150	.168	.181	.191	.195	.186	.190	.194	.204	.210	.218	.234	.237	.241	.242	.235	.231	31.
Sums.	**323.755**	323.681	323.608	323.594	323.639	393.682	393.725	393.837	293.881	293.886	**293.895**	293.822	293.675	293.527	293.477	293.469	293.464	293.569	293.662	293.633	293.663	293.679	293.595	293.503	Sums.
Monthly Sums.	913.118	913.058	912.910	912.873	913.083	913.244	913.464	913.840	914.058	**914.143**	914.131	913.962	913.418	913.026	912.825	912.765	912.727	912.918	913.216	913.290	913.391	**913.511**	913.428	913.236	Monthly Sums.
Means.	29.455	.453	.449	.447	.454	.460	.467	.479	.486	**.489**	.488	.483	.465	.452	.446	.444	.443	.449	.459	.461	.464	**.468**	.465	.459	Means.

NOVEMBER.

Date.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	12	A. M. 1	2	3	4	5	6	7	8	9	10	11	Date.
1.	29.227	29.223	29.221	29.220	29.224	29.230	29.240	29.254	29.260	29.264	29.262	29.260	29.248	29.244	29.236	29.238	29.248	29.261	29.270	29.282	29.296	29.305	29.306	29.306	1.
2.	.314	.321	.335	.337	.356	.373	.388	.403	.416	.428	.440	.434	.426	.416	.410	.410	.412	.416	.423	.429	.432	.436	.432	.432	2.
3.	.431	.425	.424	.416	.409	.414	.415	.415	.415	.415	.412	.385	.345	.339	.320	.320	.289	.288	.283	.290	.287	.280	.255	.233	3.
4.	.211	.180	.172	.148	.134	.134	.127	.140	.140	.157	.183	.210	.216	.230	.259	.285	.325	.358	.389	.411	.441	.467	.480	.498	4.
5.	.494	.515	.534	.538	.554	.559	.565	.564	.577	.588	.589	.584	.567	.547	.527	.520	.513	.523	.524	.511	.512	.516	.513	.513	5.
6.	.513	.505	.497	.493	.493	.479	.469	.467	.455	.450	.430	.404	.340	.314	.245	.182	.150	.121	.113	.101	.060	.027	28.988	28.980	6.
7.	28.920	28.845	28.742	28.620	28.555	28.580	28.530	28.600	28.686	28.727	28.764	28.800	28.830	28.850	28.862	28.893	28.933	28.962	28.993	.017	.042	.063	29.080	29.092	7.
8.	29.105	29.116	29.119	29.116	29.117	29.120	29.132	29.154	29.171	29.173	29.180	29.161	29.143	29.147	29.154	29.171	29.192	29.223	29.249	.260	.277	.297	.313	.319	8.
9.	.335	.343	.356	.358	.369	.383	.391	.407	.427	.436	.437	.431	.408	.402	.402	.406	.412	.414	.430	.440	.450	.450	.454	.453	9.
10.	.451	.450	.448	.442	.443	.447	.450	.456	.466	.464	.465	.446	.417	.403	.395	.390	.386	.384	.381	.369	.363	.363	.360	.350	10.
Sums.	293.001	292.933	292.848	292.688	292.654	292.719	292.707	292.860	292.996	293.102	293.162	293.115	292.940	292.892	292.810	292.815	292.860	292.950	293.055	293.110	293.160	293.104	**293.181**	293.176	Sums.
11.	29.352	29.345	29.346	29.342	29.348	29.348	29.351	29.355	29.363	29.368	29.388	29.377	29.356	29.343	29.344	29.351	29.362	29.365	29.385	29.386	29.393	29.408	29.420	29.430	11.
12.	.425	.420	.425	.418	.425	.426	.432	.438	.451	.456	.463	.450	.435	.428	.424	.412	.402	.395	.375	.341	.302	.285	.283	.205	12.
13.	.125	.053	.000	28.925	28.907	28.852	28.834	28.825	28.798	28.760	28.749	28.710	28.692	28.685	28.676	28.662	28.660	28.668	28.675	28.682	28.691	28.700	28.715	28.722	13.
14.	28.758	28.776	28.804	28.813	28.844	28.858	28.903	28.928	28.952	28.967	28.980	28.985	28.985	28.990	29.001	29.027	29.049	29.069	29.102	29.130	29.147	29.160	29.170	29.176	14.
15.	29.177	29.182	29.183	29.180	29.190	29.210	29.225	29.263	29.292	29.318	29.335	29.335	29.325	29.325	.325	.334	.354	.375	.395	.420	.435	.462	.468	.473	15.
16.	.484	.500	.525	.560	.578	.603	.623	.649	.660	.667	.679	.686	.682	.682	.678	.691	.696	.702	.703	.704	.704	.724	.706	.696	16.
17.	.688	.671	.667	.651	.646	.643	.635	.631	.615	.612	.592	.560	.528	.503	.474	.461	.453	.450	.442	.426	.394	.380	.360	.338	17.
18.	.328	.285	.276	.245	.203	.155	.120	.088	.070	.050	28.995	28.908	28.830	28.740	28.722	28.757	28.786	28.811	28.835	28.860	28.886	28.916	28.935	28.929	18.
19.	28.952	28.965	28.983	28.976	28.968	28.973	28.970	28.978	28.975	28.968	28.970	28.965	28.983	28.987	28.988	29.004	29.035	29.065	29.091	29.113	29.140	29.150	29.133	29.148	19.
20.	29.131	29.158	29.160	29.171	29.170	29.171	29.180	29.180	29.176	29.174	29.160	29.135	29.106	29.076	29.064	.058	.057	.062	.076	.083	.084	.093	.096	.103	20.
Sums.	**292.420**	292.355	292.369	292.281	292.279	292.239	292.273	292.335	**292.352**	292.340	292.311	292.111	291.922	291.759	291.616	291.727	291.854	291.962	292.079	292.145	292.176	292.278	292.286	292.220	Sums.
21.	29.115	29.124	29.140	29.150	29.162	29.181	29.205	29.229	29.254	29.254	29.253	29.250	29.243	29.246	29.245	29.256	29.272	29.291	29.320	29.350	29.360	29.368	29.373	29.381	21.
22.	.374	.392	.402	.407	.408	.422	.434	.455	.480	.494	.483	.474	.463	.455	.467	.484	.502	.517	.525	.545	.530	.527	.530	.528	22.
23.	.508	.497	.470	.448	.437	.400	.370	.336	.324	.278	.226	.153	.075	.044	28.968	28.913	28.910	28.890	28.872	28.850	28.828	28.816	28.787	28.754	23.
24.	28.713	28.709	28.692	28.689	28.683	28.700	28.766	28.796	28.835	28.843	28.880	28.890	28.888	28.921	28.956	29.005	29.063	29.092	29.125	29.158	29.195	29.215	29.245	29.273	24.
25.	29.268	29.268	29.298	29.301	29.319	29.337	29.355	29.358	29.352	29.358	29.345	29.344	29.275	29.248	29.187	.178	.078	.032	.007	28.820	28.750	28.704	28.722	28.724	25.
26.	28.758	28.815	28.883	28.948	29.030	.105	.173	.219	.268	.313	.322	.329	.351	.368	.385	.420	.447	.456	.483	29.509	29.534	29.542	29.553	29.568	26.
27.	29.566	29.557	29.568	29.567	.569	.570	.588	.595	.607	.607	.603	.576	.556	.543	.534	.531	.520	.529	.530	.529	.526	.528	.522	.522	27.
28.	.505	.501	.506	.495	.487	.480	.488	.486	.480	.486	.474	.450	.433	.421	.408	.404	.393	.393	.401	.409	.403	.400	.395	.394	28.
29.	.390	.385	.374	.350	.347	.331	.324	.323	.313	.300	.286	.259	.223	.203	.185	.172	.175	.176	.168	.176	.178	.177	.177	.177	29.
30.	.180	.182	.191	.185	.180	.180	.188	.198	.201	.206	.200	.170	.150	.130	.107	.104	.085	.060	.031	.002	.007	28.955	28.907	28.864	30.
Sums.	292.377	292.430	292.524	292.540	292.622	292.706	292.891	292.995	293.114	**293.139**	293.072	292.895	292.657	292.579	292.442	292.467	292.445	292.436	**292.462**	292.348	292.311	292.232	292.211	292.185	Sums.
Monthly Sums.	**877.798**	877.778	877.741	877.509	877.555	877.664	877.871	878.190	878.462	**878.581**	878.545	878.121	877.519	877.230	876.868	877.009	877.159	877.348	877.596	877.603	877.647	877.614	877.678	877.581	Monthly Sums.
Means.	**29.260**	.259	.258	.250	.252	.255	.262	.273	.282	**.286**	.285	.271	.251	.241	.229	.234	.239	.245	.253	.253	.255	.254	.256	.253	Means.

DECEMBER.

P. M. A. M. P. M.

Date.	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Date.
1.	28.830	28.759	28.766	28.766	28.765	28.772	28.805	28.839	28.870	28.889	28.905	28.922	28.928	28.926	28.946	28.956	28.966	28.968	28.971	28.976	28.974	28.972	28.961	28.954	1.
2.	28.948	28.934	28.910	28.872	28.840	28.818	28.806	28.797	28.793	28.801	28.800	28.795	28.786	28.786	28.796	28.815	28.832	28.851	28.861	28.878	28.898	28.912	28.910	28.937	2.
3.	28.952	28.957	28.972	28.997	29.020	29.045	29.078	29.082	29.120	29.135	29.145	29.135	29.133	29.134	29.150	29.186	29.200	29.238	29.264	29.300	29.325	29.353	29.380	29.400	3.
4.	29.436	29.453	29.490	29.507	.538	.543	.565	.595	.633	.649	.677	.670	.667	.665	.665	.693	.715	.748	.757	.801	.805	.808	.816	.845	4.
5.	.859	.856	.866	.878	.840	.861	.866	.863	.862	.868	.858	.804	.773	.738	.697	.690	.690	.668	.619	.582	.538	.506	.478	.463	5.
6.	.432	.400	.377	.371	.343	.361	.396	.400	.413	.433	.451	.467	.460	.442	.448	.450	.460	.450	.486	.458	.467	.455	.475	.466	6.
7.	.405	.458	.452	.415	.392	.375	.386	.346	.328	.349	.315	.324	.275	.244	.222	.225	.210	.211	.210	.215	.220	.223	.225	.230	7.
8.	.234	.258	.280	.285	.283	.296	.318	.350	.369	.410	.425	.420	.402	.394	.390	.395	.423	.438	.458	.478	.481	.495	.507	.516	8.
9.	.518	.514	.512	.517	.535	.555	.571	.590	.605	.625	.647	.623	.606	.589	.601	.623	.635	.643	.664	.682	.698	.708	.718	.721	9.
10.	.718	.720	.721	.712	.708	.698	.698	.698	.700	.701	.700	.670	.640	.600	.586	.583	.580	.567	.550	.555	.548	.530	.508	.496	10.
Sums.	293.332	293.309	293.346	293.320	293.264	293.324	293.489	293.560	293.693	293.860	**293.923**	293.830	293.670	293.518	293.501	293.616	293.711	293.782	293.840	293.925	293.954	293.962	293.978	**294.128**	Sums.
11.	29.485	29.454	29.452	29.441	29.438	29.432	29.432	29.441	29.454	29.455	29.458	29.455	29.452	29.453	29.453	29.464	29.474	29.476	29.483	29.507	29.505	29.513	29.533	29.543	11.
12.	.540	.522	.521	.522	.513	.512	.493	.500	.522	.522	.515	.491	460	.475	.435	.423	.413	.392	.389	.367	.357	.350	.322	.298	12.
13.	.246	.232	.201	.165	.132	.115	.095	.074	.037	.020	28.972	28.925	28.865	28.840	28.810	28.812	28.790	28.766	28.740	28.721	28.707	28.698	28.678	28.668	13.
14.	28.651	28.622	28.625	28.621	28.623	28.633	28.644	28 658	28.674	28.713	28.735	28.752	28.774	28.780	28.814	28.854	28.895	28.943	29.975	29.005	29.030	29.031	29.042	29.042	14.
15.	29.013	29.005	29.005	28.980	28.962	28.964	28.964	28.956	28.960	28.972	28.982	28.962	28.950	28.936	28.936	28.947	28.963	28.963	28.960	28.965	28.947	28.936	28.930	28.904	15.
16.	28.878	28.845	28.846	28.820	28.798	28.797	28.782	28.808	28.780	28.768	28.746	28.710	28.701	28.740	28.778	28.824	28.890	28.922	29.006	29.103	29.135	29.203	29.245	29.292	16.
17.	29.309	29.342	29.373	29.398	29.423	29.452	29.480	29.515	29.536	29.571	29.583	29.562	29.555	29.541	29.540	29.566	29.575	29.581	.598	.609	.610	.610	.598	.610	17.
18.	.576	.560	.558	.518	.482	.442	.418	.396	.402	.398	.405	.390	.360	.344	.315	.300	.297	.275	.250	.228	.198	.160	.148	.121	18.
19.	.144	.121	.134	.145	.154	.173	.205	.220	.265	.293	.333	.311	.300	.303	.320	.331	.336	.370	.395	.403	.412	.400	.412	.418	19.
20.	.420	.412	.407	.420	.415	.433	.439	.452	.465	.473	.482	.454	.435	.422	.404	.422	.422	.423	.428	.445	.445	.464	.466	.455	20.
Sums.	292.262	292.115	292.122	292.030	291.940	291.953	291.952	292.020	292.095	292.185	**292 211**	292.012	291.852	291.834	291.805	291.943	292.055	292.111	292.224	292.253	292.346	292.365	**292.374**	292.351	Sums.
21.	29.470	29.482	29.491	29.483	29.482	29.473	29.475	29.480	29.480	29.490	29.491	29.474	29.434	29.405	29.373	29.397	29.401	29.397	29.411	29.435	29.447	29.442	29.452	29.462	21.
22.	.470	.470	.483	.496	.498	.520	.523	.533	.546	.556	.560	.545	.526	.514	.516	.523	.540	.559	.576	.588	.592	.604	.614	.620	22.
23.	.623	.620	.638	.660	.673	.695	.719	.755	.750	.790	.794	.760	.734	.713	.715	.745	.732	.713	.707	.701	.702	.691	.653	.625	23.
24.	.593	.577	.557	.533	.492	.462	.448	.434	.413	.414	.386	.338	.287	.260	.238	.239	.170	.139	.112	.090	.048	28.990	28.952	28.937	24.
25.	28.917	28.864	28.860	28.882	28.884	28.921	28.958	28.998	.030	.098	122	.128	.150	.190	.221	.280	.320	.360	.405	.415	.440	29.470	29.502	29.514	25.
26.	29.514	29.532	29.551	29.560	29.564	29.571	29.558	29.569	.590	.580	.588	.578	.534	.496	.467	.452	.438	.419	.442	.425	.385	.386	.377	.333	26.
27.	.311	.292	.300	.260	.250	.258	.271	.292	.296	.295	.262	.223	.227	.242	.259	.266	.301	.320	.368	.376	.392	.402	.421	.435	27.
28.	.445	.445	.467	.461	.480	.488	.515	.536	.550	.554	.549	.521	.498	.486	.467	.474	.476	.488	.488	.494	.495	.494	.483	.477	28.
29.	.457	.441	.440	.434	.427	.426	.433	.448	.467	.492	.510	.497	.487	.490	.515	.548	.573	.602	.623	.639	.645	.660	.678	.687	29.
30.	.683	.688	.706	.700	.695	.693	.703	.710	.710	.719	.733	.713	.686	.676	.677	.686	.685	.683	.684	.679	.680	.680	.678	.673	30.
31.	.634	.627	.633	.618	.605	.580	.579	.573	.570	.566	.555	.517	.466	.433	.410	.393	.361	.311	.283	.237	.177	.140	.114	.099	31.
Sums.	**324.117**	324.038	324.126	324.087	324.050	324.087	324.182	324.328	324.402	**324.554**	324.552	324.294	324.029	323.905	323.868	324.003	323.997	323.991	324.099	324.079	324.003	323.959	323.924	323.862	Sums.
Monthly Sums.	909.711	909.402	909.594	909.437	909.254	909.364	909.623	909.908	910.190	910.599	**910.696**	910.136	909.551	909.257	909.174	909.562	909.763	909.884	910.163	910.257	910.303	910.286	910.276	**910.341**	Monthly Sums.
Means.	29.345	.338	.342	.337	.330	.334	.343	.352	.361	.374	**.377**	.359	.340	.331	.328	.341	.347	.351	.360	.363	.365	.364	.364	**.366**	Means.

ANNUAL SUMMARY.

Month.	P. M. 12	1	2	3	4	5	6	7	8	9	10	11	A. M. 12	1	2	3	4	5	6	7	8	9	10	11
January.....	29.281	29.274	29.276	29.276	29.272	29.275	29.285	29.295	29.303	29.320	**29.324**	29.309	29.290	29.272	29.267	29.269	29.280	29.281	29.289	29.297	**29.299**	**29.299**	29.297	29.293
February....	.254	.251	.252	.247	.251	.259	.267	.280	.293	.297	**.298**	.292	.271	.254	.241	.237	.225	.241	.247	.253	.253	**.254**	.254	.252
March	.164	.162	.157	.153	.155	.161	.171	.180	.185	**.188**	.184	.179	.169	.152	.137	.132	.135	.140	.147	.159	.165	.169	**.171**	.168
April.....	.429	.421	.415	.411	.418	.422	.434	.444	.446	**.451**	.449	.441	.431	.421	.409	.398	.394	.396	.401	.413	.423	.431	.430	**.432**
May	.226	.221	.218	.213	.215	.224	.231	.235	**.237**	.236	.235	.228	.220	.208	.201	.195	.194	.194	.207	.213	.223	**.231**	.229	.227
June.....	.290	.288	.284	.282	.286	.294	.301	.309	**.311**	.309	.308	.305	.298	.287	.280	.273	.272	.271	.274	.281	.287	.295	.294	**.296**
July	**.281**	.272	.268	.262	.269	.273	.279	.287	**.288**	.285	.285	.379	.271	.263	.255	.249	.244	.243	.248	.253	.260	.267	.268	.270
August.....	.286	.286	.281	.277	.279	.287	.295	.305	.309	**.314**	.313	.306	.298	.290	.283	.276	.273	.274	.278	.282	.291	**.292**	.292	.288
September ..	**.445**	.444	.440	.438	.439	.448	.462	.469	.476	**.479**	.474	.465	.454	.440	.432	.424	.422	.424	.427	.434	.439	.422	.443	.440
October.....	.455	.453	.449	.447	.454	.460	.467	.479	.486	**.489**	.488	.483	.465	.452	.446	.444	.443	.449	.459	.461	.464	**.468**	.465	.459
November...	**.260**	.259	.258	.250	.252	.255	.262	.273	.282	**.286**	.285	.271	.251	.241	.229	.234	.239	.245	.253	.253	.255	.254	.256	.253
December...	.345	.338	.342	.337	.330	.334	.343	.352	.361	.374	**.377**	.359	.340	.331	.328	.341	.347	.351	.360	.363	.365	.364	.364	**.366**
Annual Sums....	351.716	351.669	351.640	351.593	351.620	351.692	351.797	351.908	351.977	**352.028**	352.020	351.917	351.757	351.611	351.508	351.472	351.468	351.509	351.590	351.662	351.724	**351.766**	351.763	351.744
Means	29.310	.305	.303	.299	.302	.308	.316	.326	.331	**.336**	.335	.326	.313	.301	.292	.289	.289	.292	.299	.305	.310	**.314**	.314	.312

TRACINGS

FROM THE

SELF-RECORDING INSTRUMENTS,

TO ILLUSTRATE CERTAIN

METEOROLOGICAL PHENOMENA

DURING THE

YEAR 1886.

THE tracings on Plates Nos. 1 and 1 A show the barometer corrected to 32° Fahrenheit. This correction is made automatically by the barograph. Plates Nos. 4 and 5 give the relative humidities in percentages of saturation.

Curve 1, Plate No. 1 A, shows the barograph trace on Jan. 9, during a remarkable cyclonic storm which, moving northeastward along the Atlantic coast, apparently passed centrally over this station, and the barometer reached the lowest point yet recorded. Plate No. 6 shows the tracing of the Draper anemograph on this day. The lull in the wind in the middle of the day was coincident with or immediately preceded the passage of the cyclone centre, as well as can be determined from synoptic charts; but this lull preceded the occurrence of the minimum pressure recorded at this station by nearly two hours. Plate No. 7 shows the changes in wind direction during this cyclone. The sinuous line on this plate was traced through the centre of the oscillations of the wind vane, as shown on the original anemoscope sheet. (The vane is never steady during high winds, but continuously oscillates, first to one side, then to the other, making a broad trace on the anemoscope sheet.) The results of a special study of this cyclone are given by Prof. Upton in the *American Meteorological Journal*, Vol. III., No. 8.

Curve 2, Plate No. 1, shows the tracing of the barograph on the morning of Feb. 27, during one of the severest gales on record. The sharp depression at 10.20 A. M. was coincident with the opening of a trap door in the top of the tower, and the other less marked sharp depressions were noted by the observer as being coincident with severe gusts of wind. The pressure gauge shows the pressure during some of the gusts to have been over forty pounds per square foot, which is equivalent to a velocity of about 90 miles per hour. The total wind movement for the day was 1,467 miles. The barograph tracing is but a sample of what occurred in a less marked degree during all of the severe gales of the year. (For further information, see *Science*, Vol. VIII., page 325.)

Curve 3, Plate No. 1 A, shows the barograph trace during four hours, ending at 3 A. M., of March 22. There was also a slight upward swell of the temperature curve during these hours. An inappreciable quantity of snow fell, and bright flashes of lightning were seen about 1 A. M., but no thunder was heard. Severe thunder-storms were, however, reported from distant points on this night. The wind suddenly backed for a brief interval from northeast to west at 12.15 A. M., then, returning to northeast, slowly backed during the night to west. A decided decrease in wind velocity between 12.30 and 2 A. M. accompanied the rise in pressure.

Curves 1, Plates Nos. 2 and 4, show tracings of the thermograph and self-recording hygrometer, respectively, from 10 A. M. to 12 M. of April 7. The sudden rise in temperature and fall in humidity at 11.20 A. M. was coincident with a brief clearing of the sky near the zenith and the appearance of the sun, the observatory during the rest of the day being enveloped in a dense fog. Accompanying these phenomena, there was a sudden shift of the wind from southwest to north. Similar appearances of sunshine during the year did not produce similar effects on the temperature and humidity, and it is suggested that in this case the phemomena may have arisen from a brief, local descending current of air.

Curves 2, Plates Nos. 2 and 4, show the sudden fall of temperature and sudden rise of humidity which accompanied a thunder-storm between 4.45 and 6.20 P. M. of May 5. There was also a slight rise of the barograph curve. The wind suddenly shifted from south to northwest at 4.45 P. M., after which it slowly backed again to south. No noticeable change in wind velocity occurred. Rain fell from 4.45 to 8.40 P. M., and amounted to 0.42 inch. Curve 1, Plate No. 8, shows the tracing of the self-recording rain gauge during the time.

Curves 4, Plate No. 1 A, 3, Plates Nos. 2 and 4, show the tracings of the barograph, thermograph, and hygrometer, respectively, between 3 and 6 A. M. of May 31. Thunder was first heard on this morning about 3 A. M. Rain began at 4.15, and ended at 5.20 A. M., and 0.35 inch fell. Curve 2, Plate No. 8, shows the tracing of the self-recording rain gauge. The wind suddenly shifted from west to north at 3.30 A. M., then returned to west at 4 A. M., but again shifted to north at 5 A. M. The wind velocity decreased both before and after the storm, but blew with a velocity of about twenty-five miles per hour from the north during the storm.

Curves 4, Plates Nos. 2 and 4, show the tracings of the thermograph and hygrometer on June 10 between 7 and 10 P. M., during which time a light thunder-shower passed over the observatory. The clouds attending this shower were broken and not well developed. There was an outspreading top, but no cirrus fringe. About 0.10 inch of rain fell, most of which came in a sudden down-pour between 8.5 and 8.10 P. M. See curve 3, Plate No. 9. During the storm the wind veered from northeast to southwest, and there was an increase in velocity at 7.55 P. M., lasting about five minutes. Thunder was not heard until the rain had nearly ceased, but continued for about half an hour as the storm passed to the east, apparently increasing in intensity.

Curve 5, Plate No. 1, shows the tracing of the barograph between 2 and 4 A. M., July 30, during which time a thunder-storm passed over the observatory, attended by a most brilliant and almost continuous display of

lightning and loud thunder. Several houses in the neighboring towns were set on fire by the lightning. 0.10 inch of rain fell; most of it, as shown by the self-recording rain gauge in Plate No. 9, curve 4, fell between 2.45 and 2.50 A. M. The wind veered from southwest to northwest during the passage of the storm, and backed to south after the storm passed. There was a slight decrease in wind velocity for a short while preceding and following the storm, and a decided increase during its passage. Both the temperature and humidity were high, and showed no marked changes during the passage of the storm.

Curves 6, Plate No. 1 A, 5 (dotted), Plate No. 2, and 5, Plate No. 5, show the tracings of the barograph, thermograph, and hygrometer, between 3 and 6 P. M. of Aug. 12. A thunder-storm passed over the observatory immediately after 4 P. M., attended by a heavy shower of rain and a little hail. Almost the whole of the rain (0.42 inch) fell in a rapid down-pour, lasting from 4.05 to 4.25 P. M. See tracing of the self-recording gauge, curve 5, Plate No. 9. The wind oscillated between north and west during the passage of the storm, and blew with a decidedly increased velocity from 4.15 to 4.20 P. M.

Plate No. 3 shows some inversions of temperature between the summit and base of the hill. Curve 1 shows the tracing of the thermograph at the summit from noon of Aug. 22 to noon of Aug. 23. Curve 2 (dotted) shows the tracing of a Draper thermograph at the base, or rather on the slope of the hill, four hundred feet beneath the summit. The time scale of this latter tracing is enlarged to make it correspond with the tracing at the summit. It is seen that the temperature was higher at the base during the day and decidedly lower at night. The temperature at the base continued to fall until sunrise of the 23d, while at the summit it rose after 11 P. M. of the 22d. This inversion occurred on an unusually clear, quiet night, and is a marked example of what almost invariably occurs on such nights. (For further information see *Science*, Vol. VIII., pp. 233 and 281.)

In a similar manner curves 3 and 4 (dotted) show the tracings of the thermographs at the summit and at the base of the hill, respectively, from 11 A. M. of Nov. 17 to noon of Nov. 18. It is seen that the temperature at the summit rose continuously, while the temperature at the base fell from 1 P. M. of the 17th to near 3 A. M. of the 18th, when it was 20° lower than at the summit. This was caused by the not uncommon occurrence of a flow of cold northerly winds around the base, while a strong southerly wind prevailed at the summit. At 10 P. M. of the 17th the wind was blowing three miles per hour from the northwest at the Boston Signal Office, which is ten miles north of Blue Hill Observatory, and about five hundred feet lower; while on Blue Hill it was blowing at the rate of twenty-eight miles an hour from the south. Reports from other stations show that this thin cool northerly current overspread the whole of New England, and was accompanied by a dense fog. Between 3 and 4 P. M. of the 17th these two currents were fighting for the mastery at the summit of Blue Hill, and its effects are seen on the thermograph curve and on the hygrometer curve, 9, Plate No. 5. During this time a cool, damp, foggy current would roll in, lasting five or ten minutes; then it would be displaced by a warmer current from the south lasting about the same interval. This alternate action lasted over half an hour, after which the southerly current remained permanently.

Curve 6, Plate No. 4, shows a marked example of the rapid fall in humidity which usually follows the passage of a storm. Curve 6, Plate No. 2, shows the temperature during this interval. These curves are from tracings of the hygrometer and thermograph from 9 A. M. to 3 P. M. of Sept. 24. Curve 7, Plate No. 5, which exhibits the tracing of the hygrometer from 7 A. M. to noon of Nov. 4, shows another marked example of the rapid fall of humidity immediately following the passage of the line of minimum pressure in a storm.

Curves 7, Plates Nos. 1 and 2, show the tracings of the barograph and thermograph during the passage of a thunder-storm on Nov. 6. Rain fell continuously from noon to 4.30 P. M. of this date, ending with a thunder-storm which passed over to the east. There was a slight increase in wind velocity during the passage of the storm, but no marked change in direction.

Curves 8, on Plates Nos. 1 A, 2, and 5, show the tracings of the barograph, thermograph, and hygrometer, respectively, on the early morning of Nov. 7, when a thunder-storm of moderate intensity passed over the observatory. The wind oscillated between southeast and southwest during the night, and slightly increased in velocity for a short while about 4 A. M. Heavy rain fell from midnight to 4 A. M.

Curve 9, Plate No. 2, shows a rapid rise in temperature which was coincident with the occurrence of the time of minimum pressure in a storm which, moving northeasterly along the Atlantic coast, passed centrally over this region about 9 P. M. of Nov. 25. Curve 9, Plate No. 1, shows the fall of the barometer on this date from 12 M. to 11 P. M. This curve shows small wave-like oscillations which are not uncommonly shown by the barograph curve at this observatory.

Curve 10, Plate No. 1 A, gives a rather striking example of these short wave-like undulations which occurred between 7 A. M. and noon of Dec. 7. The cause of these undulations is not clearly understood, since they cannot be directly connected with changes of the wind velocity, or with any of the meteorological elements.

H. HELM CLAYTON.

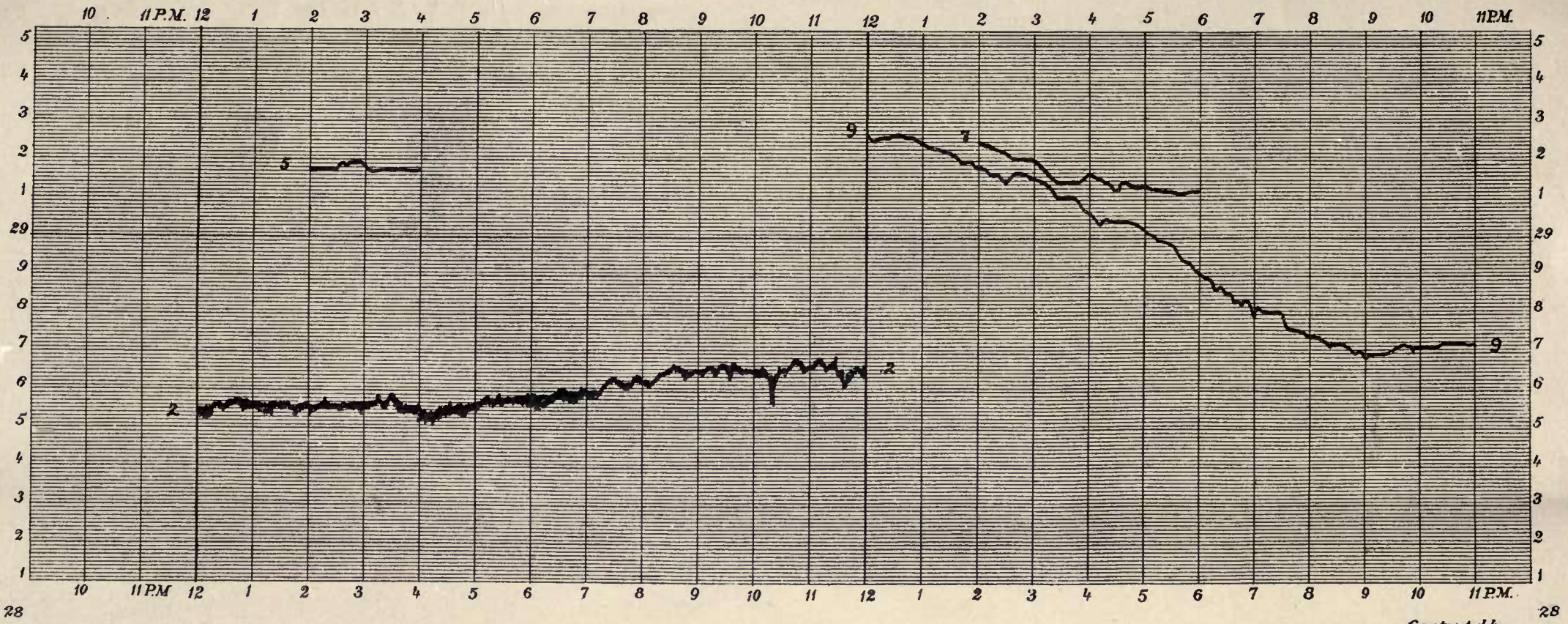
No. 1.

BLUE HILL METEOROLOGICAL OBSERVATORY.

BAROMETER.

PRESSURE OF THE ATMOSPHERE AT BLUE HILL, NORFOLK CO., MASS.

Recorded by Draper's Self-recording Pencil Barometer. _____ 1886



The barometer is here multiplying three times.

Constructed by Black & Pfister. New York City

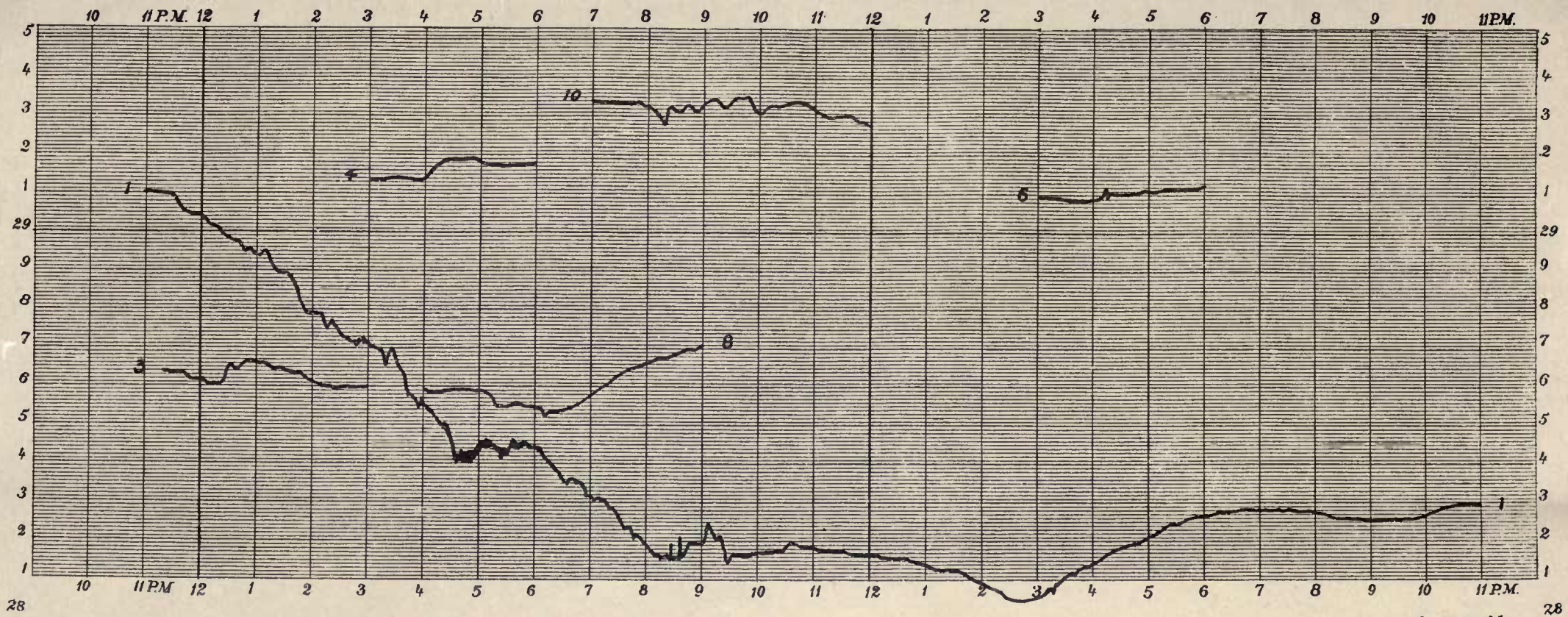
No. 1 A

BLUE HILL METEOROLOGICAL OBSERVATORY.

BAROMETER.

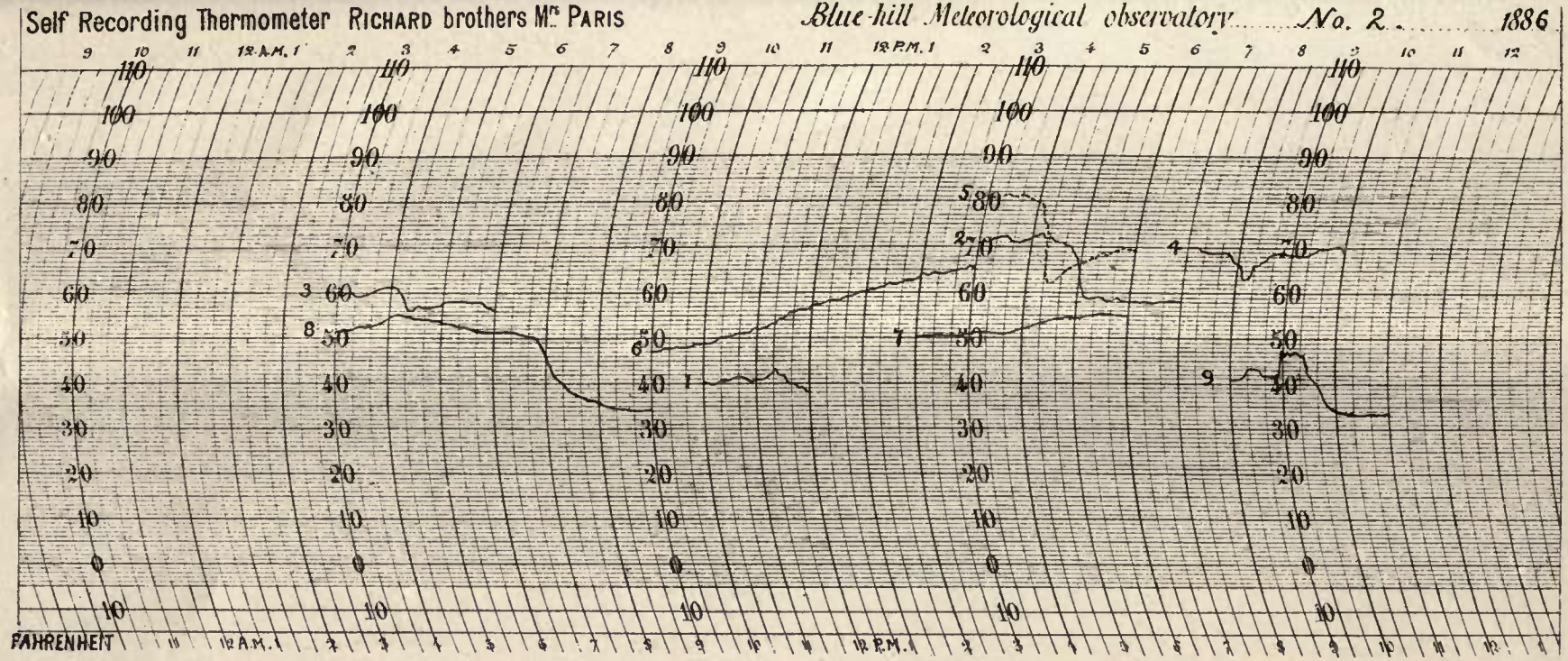
PRESSURE OF THE ATMOSPHERE AT BLUE HILL, NORFOLK CO., MASS.

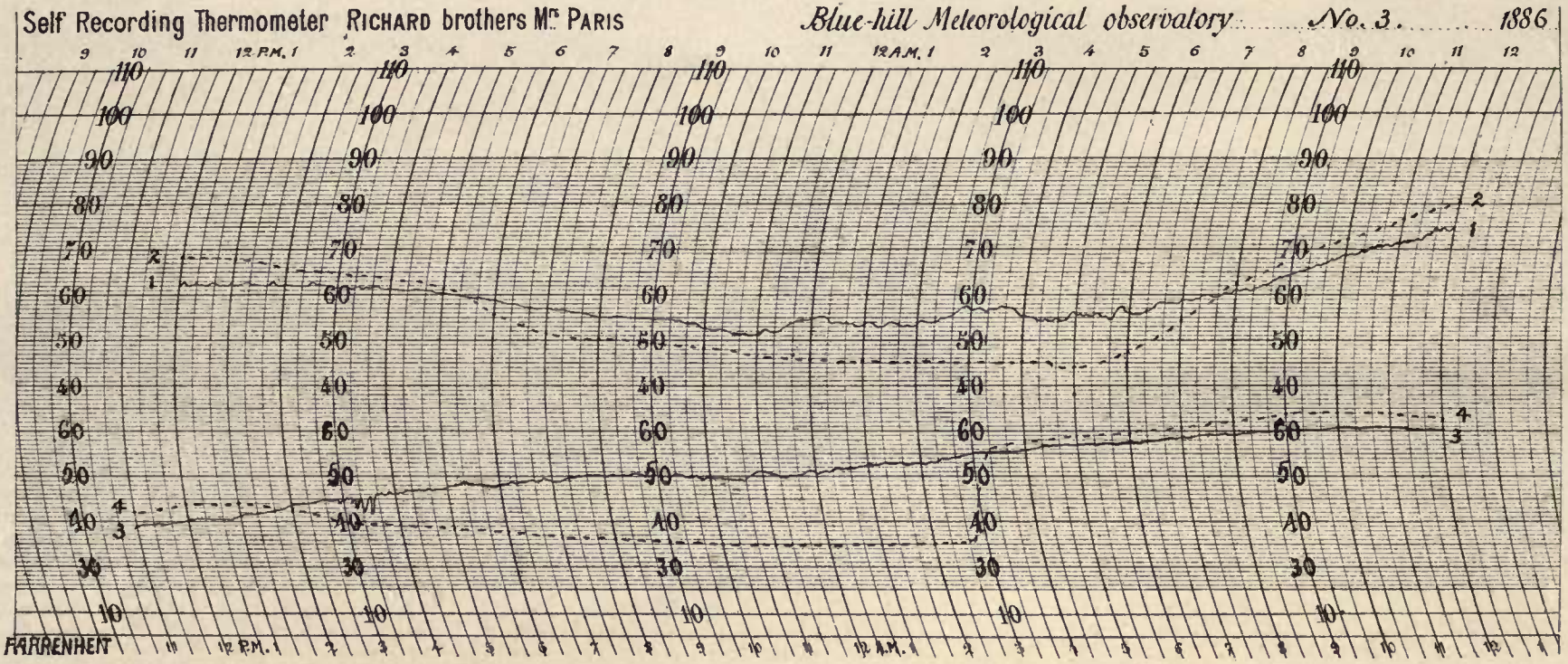
Recorded by Draper's Self-recording Pencil Barometer. _____ 1886



The barometer is here multiplying three times.

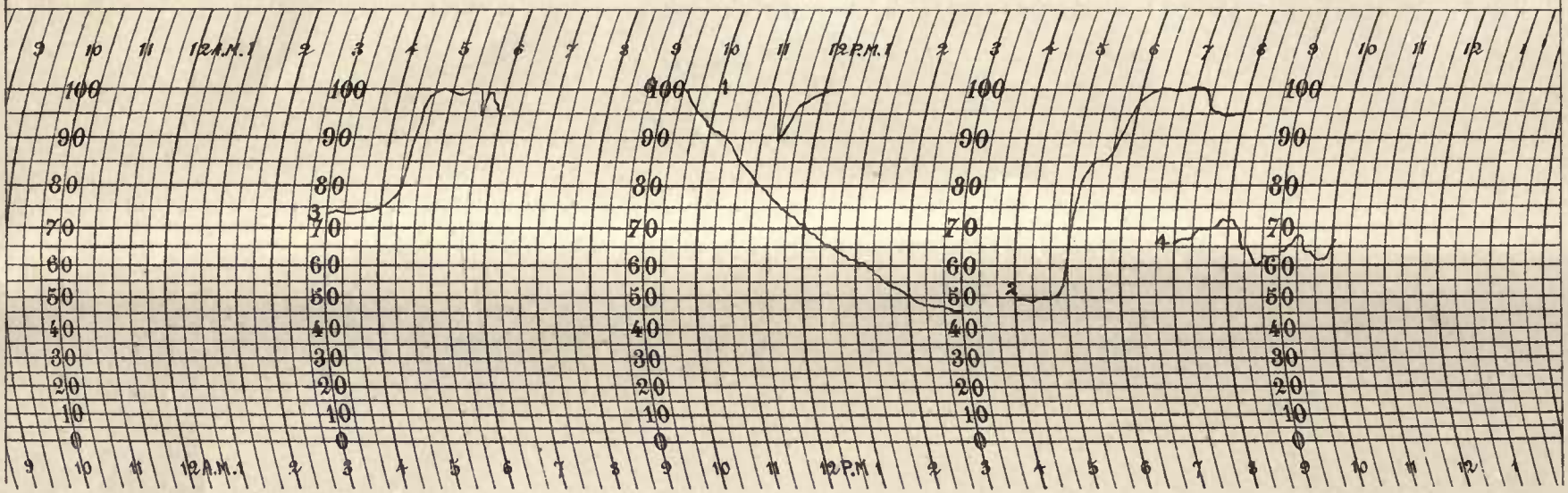
Constructed by Black & Pfister New York City


Self Recording Thermometer RICHARD brothers Mrs PARIS
Blue-hill Meteorological observatory No. 2 1886
FAHRENHEIT


Self Recording Thermometer RICHARD brothers Mrs PARIS
Blue-hill Meteorological observatory No. 3 1886
FAHRENHEIT

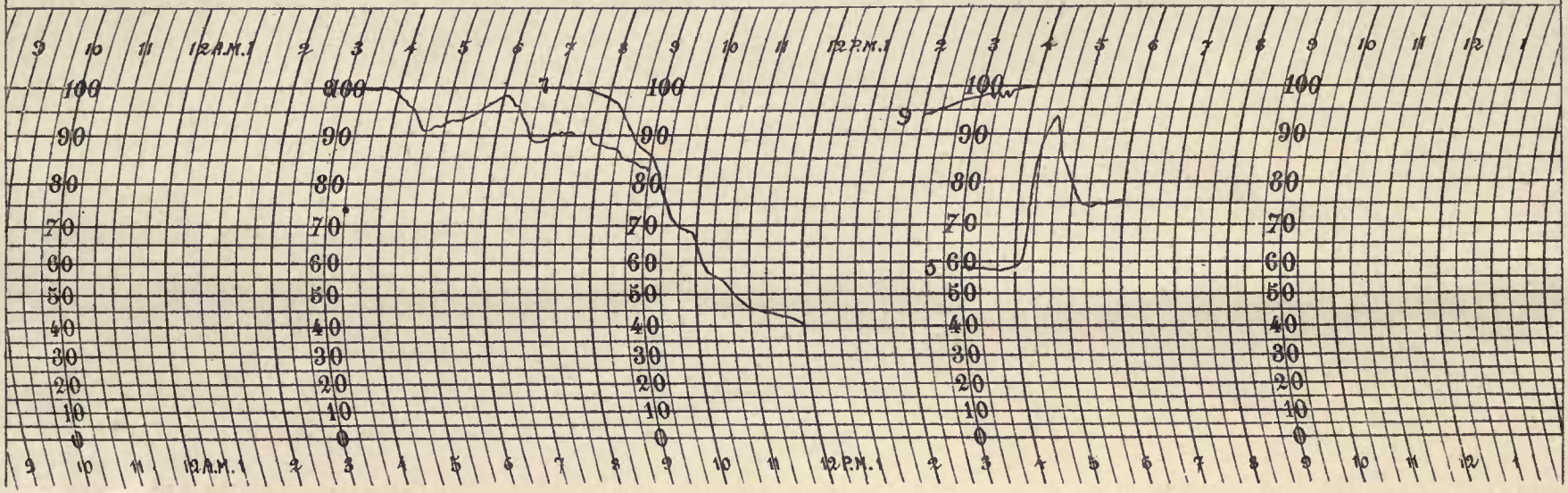
Self Recording Hygrometer, RICHARD brothers Man^rs PARIS

Blue-hill Meteorological observatory ..... No. 4. ..... 1886.



Self Recording Hygrometer, RICHARD brothers Man^rs PARIS

Blue-hill Meteorological observatory ..... No. 5. ..... 1886.



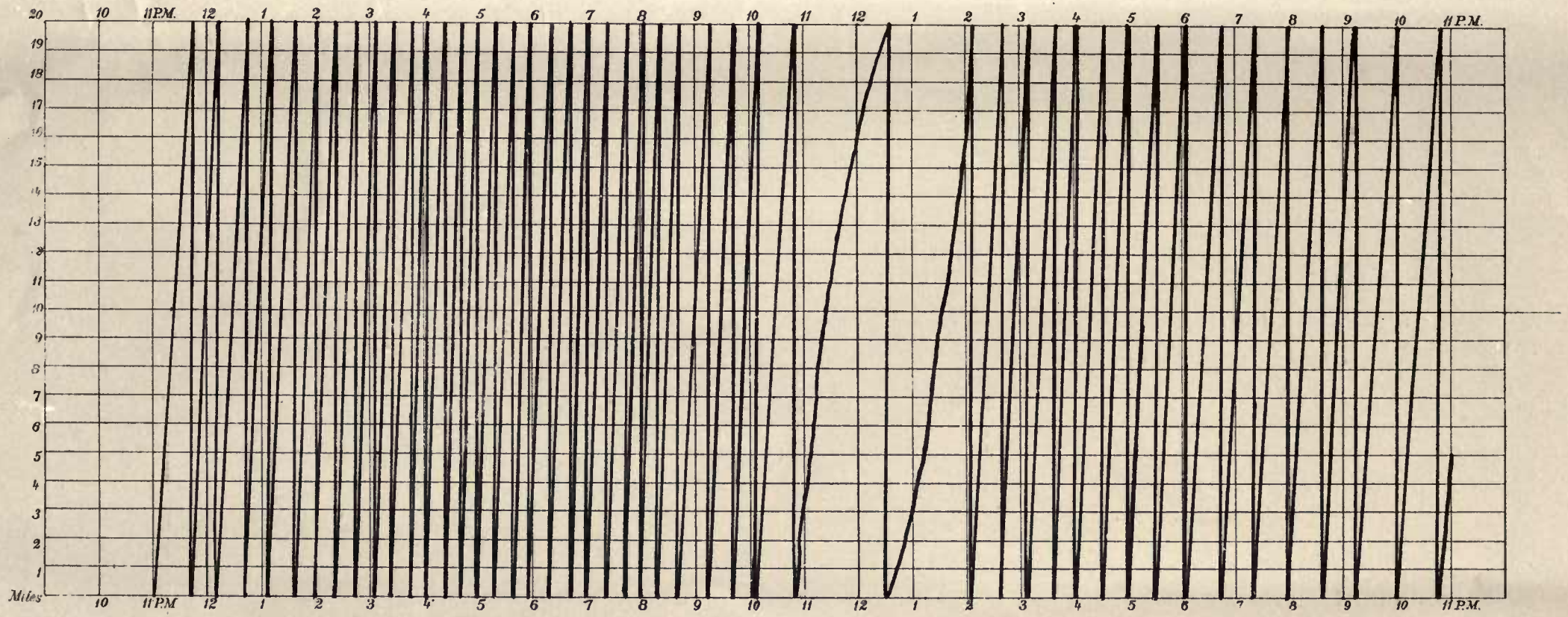
No. 6.

BLUE HILL METEOROLOGICAL OBSERVATORY.

ANEMOMETER.

VELOCITY OF THE WIND AT BLUE HILL, NORFOLK CO., MASS.

Recorded by Draper's Self-recording Pencil Anemometer. JANUARY 9, 1886



The hours are marked by the vertical lines.
The distance travelled in miles by the horizontal lines.

Constructed by
Black & Plister.
New York City

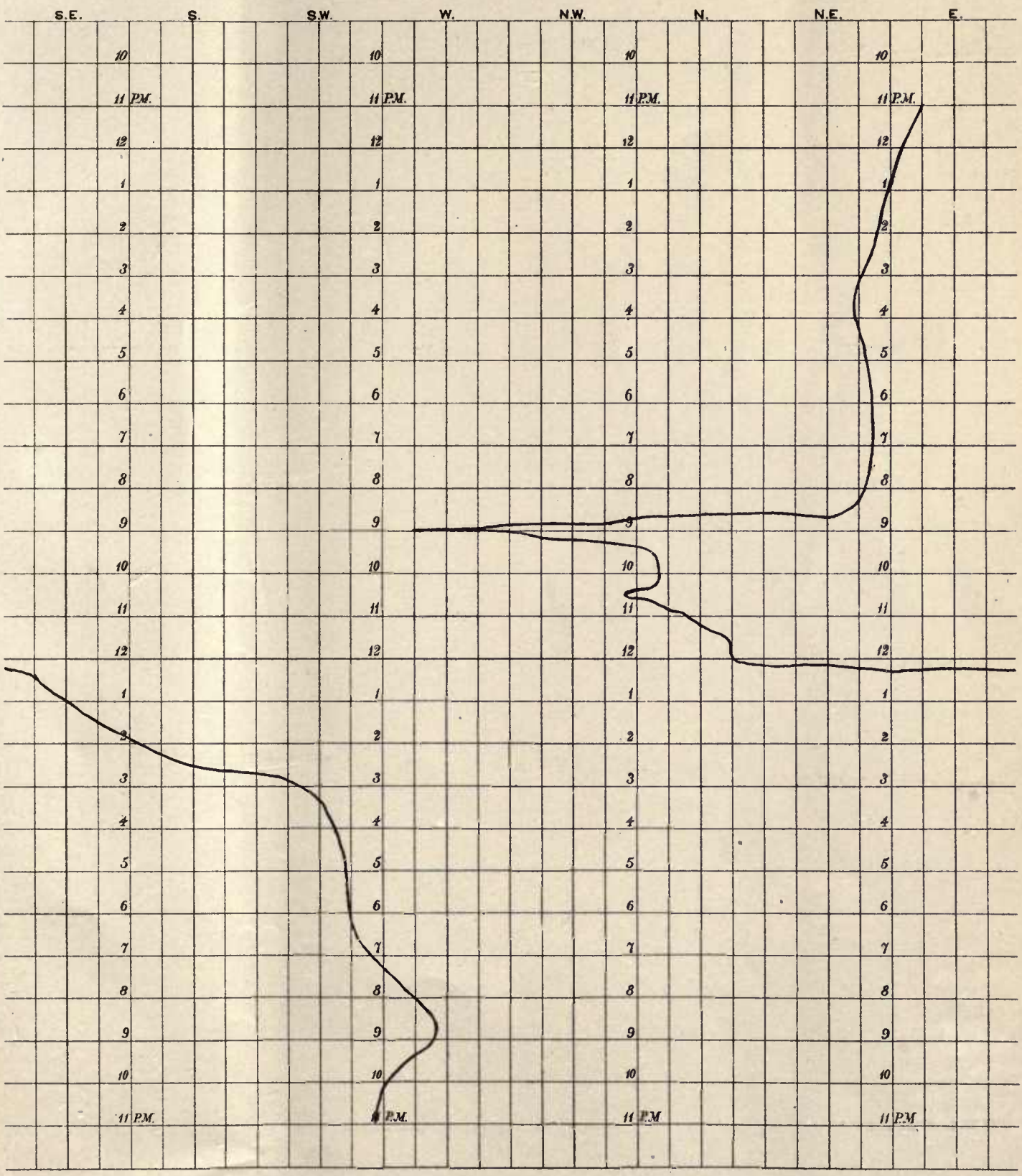
No. 7.

BLUE HILL METEOROLOGICAL OBSERVATORY.

ANEMOSCOPE.

DIRECTION OF THE WIND AT BLUE HILL, NORFOLK CO., MASS.

Recorded by Draper's Self-recording Pencil Anemoscope. JANUARY 9, 1886



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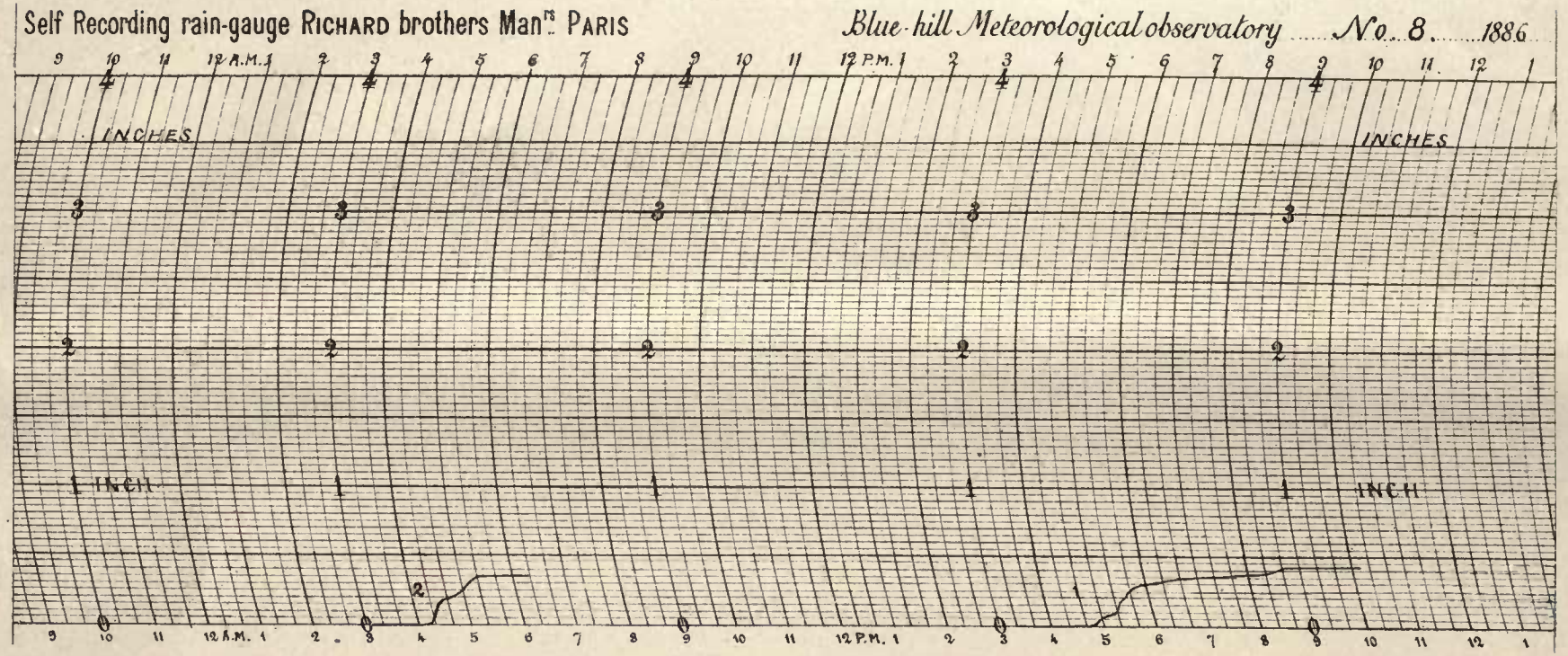
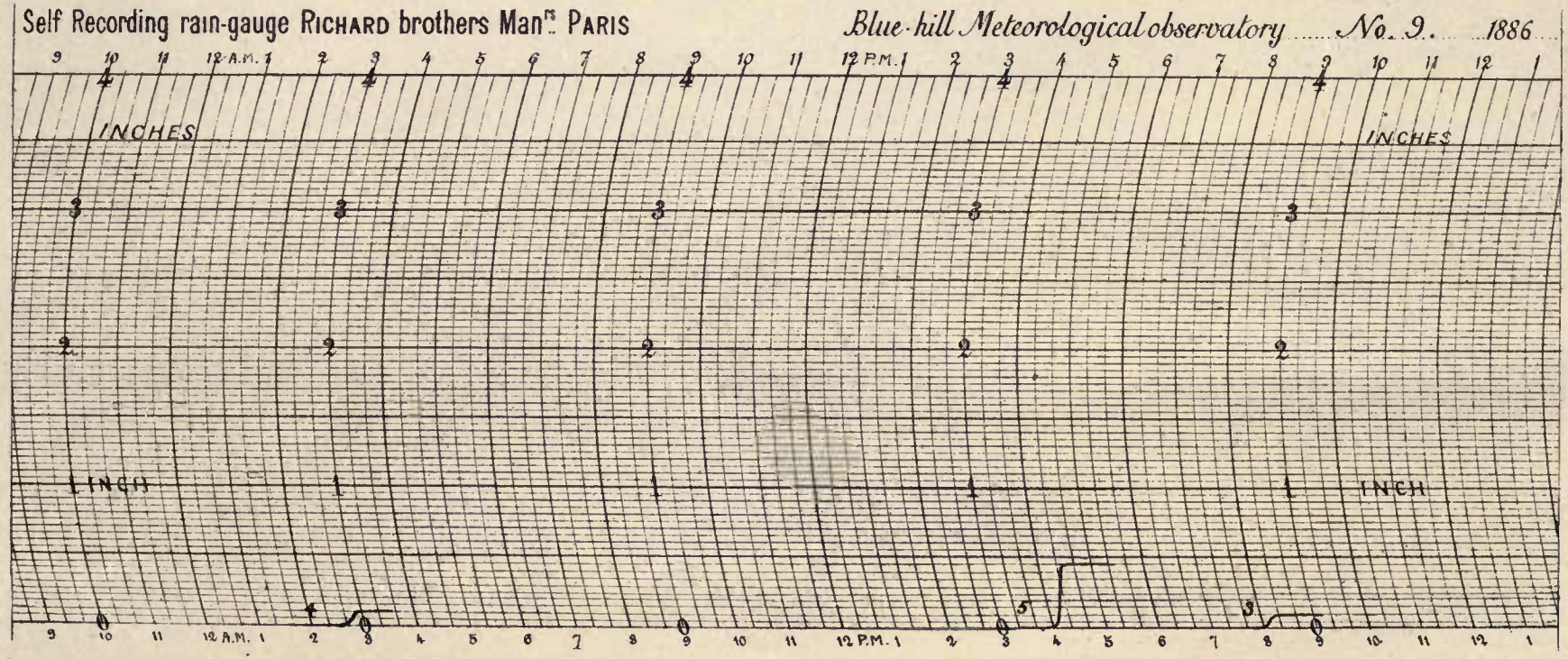
Black & Pfister
New York City


Self Recording rain-gauge RICHARD brothers Manrs. PARIS
Blue-hill Meteorological observatory No. 8 1886
INCHES
INCH


Self Recording rain-gauge RICHARD brothers Manrs. PARIS
Blue-hill Meteorological observatory No. 9. 1886
INCHES
INCH

Blue Hill meteorological observatory
Results

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B5A39

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